

REFERENCE SECTION

PLAY MODE

You will normally use the RM50 in Play mode when performing. This mode allows you to make only basic changes to the RM50 setup: you can assign a rhythm kit or pitched voice to each of the sixteen MIDI channels. To modify rhythm kit settings or voice parameters, you will need to use the functions of the Setup Edit and Voice Edit modes.

This chapter explains the settings that you can make in Play mode, plus a number of special utility functions that are available in other modes as well.

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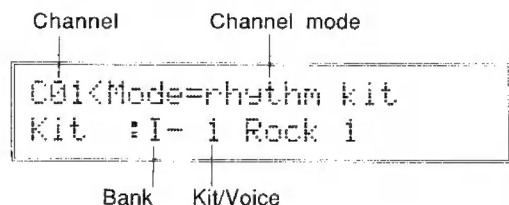
Functions in Play Mode

The functions available in Play mode are listed below, together with the key operations used to access them. All of these functions are available in the RM50's other modes as well.

DISPLAY	DISPLAY NAME	DESCRIPTION	OPERATION
<div> C01<Mode=rhythm kit Kit :I- 1 Rock 1 </div>	Play Mode	Allows selection of a channel mode and assignment of a rhythm kit or pitched voice for each MIDI channel.	[PLAY]
<div> Display chase : off< </div>	Display Chase	Switches the RM50's display chase function on and off.	[SHIFT] + [UTILITY]
<div> InPutMoni Ch Note Vel ■■■■■■■ 1 32 80 </div>	Input Monitor	Displays note information input via the MIDI IN terminal or the audio trigger jacks.	[SHIFT] + [PLAY]
<div> MACRO: PLAY=[Demo Play] Push panel switch </div>	Macro Play	Executes a previously recorded key macro.	[MACRO]
<div> KEY MACRO/Mode= record Macro key = PLAY< 1>< </div>	Macro Record	Records a series of key operations as a key macro assigned to one of the RM50's keys.	[SHIFT] + [MACRO] → [SHIFT] + [+1/YES] or [-/NO]
<div> KEY MACRO/Mode= view Macro key = PLAY< 1>< </div>	Macro View	Displays the contents of a previously recorded key macro.	[SHIFT] + [MACRO] → [SHIFT] + [+1/YES] or [-1/NO]
<div> KEY MACRO/Mode= name Macro key = PLAY< 1>< </div>	Macro Name	Assigns a name to a key macro.	[SHIFT] + [+1/YES] or [-1/NO]

Play Mode

Summary: Allows selection of a channel mode and assignment of a rhythm kit or pitched voice for each MIDI channel.



Procedure: Press [PLAY] switch to enter PLAY mode from Setup Edit, Voice Edit, or Utility mode. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to among the channel, channel mode, bank, and kit or voice settings. Use the [+1/YES] or [-1/NO] key to change the channel or channel mode, or to select a different bank, kit, or voice.

- **Channel (C01...C16):** Selects one of the sixteen MIDI channels.
- **Channel mode (rhythm kit, pitched voice, off):** Determines whether the RM50 will play a rhythm kit or a pitched voice in response to messages received on the selected MIDI channel. When "off" is set as the channel mode, the

RM50 will ignore note information received on the channel in question.

- **Bank:** Selects one of three rhythm kit banks, or one of 23 voice banks. It is also possible to set the bank selection to "off".
- **Kit/Voice:** Selects a rhythm kit or voice from the specified bank. The name of the selected kit or voice appears after its number. (A row of dashes is displayed in place of the kit/voice number and name when "off" is selected as the bank.)

Notes: When you use the rhythm kit channel mode, you can select one of three banks: the preset (P), internal (I), or data card (C) banks. Each of these banks contains 64 rhythm kits.

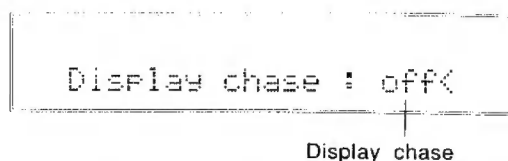
If you select the pitched voice channel mode, the RM50 will give you a choice of 23 different voice banks. You can also select "off" instead of a voice bank; however, you may find it preferable to set the channel mode to "off" instead.

The procedure for selecting a voice from the Play mode display is exactly the same as that described for the Voice Assign function on page 59.

The RM50 must be in Play mode to accept program change messages; it will ignore all program changes received while in any other mode.

Display Chase

Summary: Switches the RM50's display chase function on and off.



Procedure: Press the [SHIFT] and [UTILITY] keys to change the display chase setting.

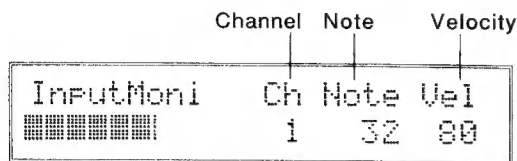
- **Display chase (on, off):** Switches the RM50 display chase function on and off. When set to "on", the RM50's display will automatically shift in response to received MIDI note messages or audio trigger input. In Setup Edit mode, it will

show the voice assignment and other settings for the received note or trigger. In Voice Edit mode, it will show the parameters for the voice assigned to that note or trigger. When set to "off", the RM50's display will not change in response to received note messages or trigger input.

Note: The display chase function can be turned on or off while the RM50 is in any mode. However, it will cause the display to change only when the RM50 is in one of the Edit modes (except when the Voice Edit mode is entered via the Click 1 function described on page 95), or when adjusting the trigger input parameters using the System Utility functions.

Input Monitor

Summary: Displays note information input via the MIDI IN terminal or the audio trigger jacks.



Velocity meter

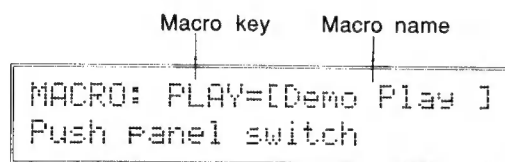
Procedure: Press the [SHIFT] and [PLAY] keys to switch to the input monitor display. Use the [EXIT] key to return to the previous display.

- **Channel:** Indicates the MIDI or audio trigger channel from which the displayed note was received.
- **Note:** Shows the note number of the received note.
- **Velocity:** Shows the velocity of the received note.
- **Velocity meter:** Displays the velocity graphically. Higher velocities are represented by longer arrows.

Note: This function will also display the note number and velocity of notes played using the [SOUND] key.

Key Macro Playback

Summary: Executes a previously recorded key macro.



Procedure: Press the [MACRO] key. The RM50 will prompt you to select the macro to be executed. Press the key corresponding to the desired macro to play it back. If you're not sure which key the macro is assigned to, press the [+1/YES] or [-1/NO] key while holding down the [SHIFT] key to display the numbers and names of other macros. (If you decide that you don't want to execute a macro at this point, press the [MACRO] key to return to the previous display.)

- **Macro key:** Shows the name of the key corresponding to the macro which was played back or recorded last.
- **Name field:** Shows the name of the macro which was last played back or recorded. The name displayed here is entered using the Macro Name function described below.

Note: The keys on the RM50's front panel correspond to macro numbers as shown in the table below.

KEY	MACRO	KEY	MACRO
[PLAY]	1	[-1/NO]	6
[EDIT]	2	[+1/YES]	7
[UTILITY]	3	[+1/YES]	7
[PAGE+]	4	EXIT]	9
[PAGE-]	5	[SOUND]	10

A list of the RM50's factory preset macros is presented on page 44.

Key Macro Record

Summary: Records a series of key operations as a key macro assigned to one of the RM50's keys.

Macro job mode

```

KEY MACRO/Mode= record
Macro key =  PLAY( 1)<
  
```

Macro key and number

Procedure: Press the [SHIFT] and [MACRO] keys to enter the macro utility mode. Press [SHIFT] and [-1/NO] keys to change the macro job type to "record". Use the [+1/YES] or [-1/NO] key to select the macro to be recorded. Press the [SHIFT] and [MACRO] keys again to begin recording. (If you decide you don't want to record a macro, press the [MACRO] key alone at this point to return to the previous display.)

Reversed "m"

```

KIT      Note=B 0/C 5 <1
Uce1 :P-BD  42 RM Lizr<
  
```

As soon as you begin recording a macro, the RM50 will shift to the Play mode display, displaying a reversed "m" in the upper right corner of the LCD to indicate that a macro is being recorded. Perform the operation exactly as you wish it to be played back by the macro, then press the [MACRO] key to complete the recording. The reversed "m" will disappear.

- **Macro job mode:** Selects the macro job to be performed. The word "record" must be displayed here in order to record a macro.
- **Macro key:** Shows the name of the key used to play back the macro to be recorded, and the macro's number.
- **Reversed "m":** Indicates that a macro is currently being recorded.

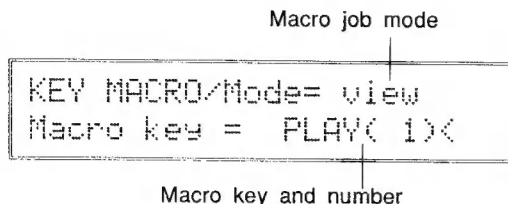
Note: The RM50's display function operates in an unusual manner when a macro is being recorded. Normally, when you enter a mode, the RM50 will display the page which you selected when you last entered that mode. Also, if that page contains a pointer, it will usually appear next to the setting or parameter you last selected for editing. Since these "shortcuts" would make recording a macro impossible, however, a few special conventions are invoked whenever you use this function.

First, all key macros begin in Play mode. Also, the RM50 will always show the first display page for any mode you enter: you will see the Voice Assign function in Setup Edit mode, the Easy Edit 1 function in Voice Edit mode, and the name of the System Utility group in Utility mode. You will also see the first display page of any Utility mode function group you enter. In the same manner, the pointer will always appear next to the very first setting or parameter in any display.

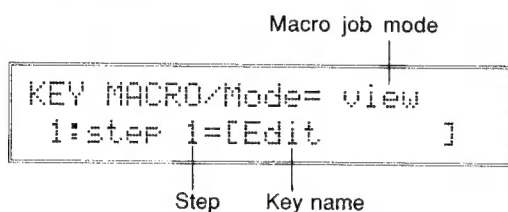
You can press any of the RM50's twelve keys, except for the [MACRO] and [SOUND] keys, as part of a macro. Each macro can include up to 50 steps. (Keystrokes combining the [SHIFT] key with another key are counted as a single step.) Pressing the [MACRO] key ends the macro and causes the RM50 to exit the record mode. The macro will also end automatically when the maximum of 50 steps have been recorded, or if you start a demo song using the Demo Play function.

Key Macro View

Summary: Displays the contents of a previously recorded key macro.



Procedure: Press the [SHIFT] and [MACRO] keys to enter the macro utility mode. Press the [+1/YES] or [-1/NO] key while holding down the [SHIFT] key to switch the macro job type to "view". Use the [+1/YES] or [-1/NO] keys to select the macro whose contents you wish to view, then press the [SHIFT] and [MACRO] keys to view the macro.



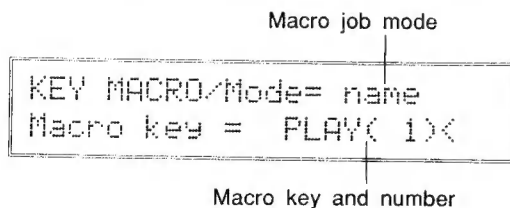
The first step of the macro will appear in the LCD. Press the [+1/YES] or [-1/NO] key to view the contents of other steps. Press the [MACRO] key once to return to the macro utility mode, or twice to return to the previous display, when you're done viewing the macro.

- **Macro job mode:** Selects the macro job to be performed. The word "view" must be displayed here in order to view the contents of a macro.
- **Macro key:** Shows the name of the key used to play back the macro to be viewed, and the macro's number.
- **Step number:** Selects a macro step for viewing.
- **Key name:** Shows the name of the key operation to be performed as the current step of the macro.

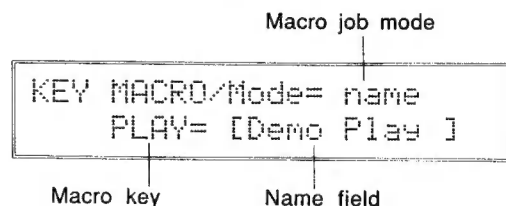
Note: This function will come in handy if you forget what macro you assigned to a key. To avoid this problem in the first place, you should assign a name to each macro as a reminder of its contents. The procedure for naming a macro is described next.

Key Macro Name

Summary: Assigns a name to a key macro.



Procedure: Press the [SHIFT] and [MACRO] keys to enter the macro utility mode. Press [SHIFT] and [+1/YES] keys to switch the macro job type to "name". Use the [+1/YES] or [-1/NO] key to select a macro to name, then press the [SHIFT] and [MACRO] keys to begin naming it.



Use the [▷] key (or the [SHIFT] and [▷] keys) to select the character you wish to change (the selected character will blink). Then use the [+1/YES] or [-1/NO] key to change the selected character. Press the [MACRO] key once to return to the macro utility mode, or twice to return to the previous display, when you've finished naming the macro.

- *Macro job mode*: Selects the macro job to be performed. The word "name" must be displayed here in order to name a macro.
- *Macro key*: Shows the name of the key used to play back the macro to be named, and the macro's number.
- *Name field*: Allows you to assign the selected macro a name of up to ten characters. A list of available characters is presented in the following note.

Note: The table below lists the characters you can use to name a macro. The same set of characters is also used when naming rhythm kits and user voices.

[space]!"#\$%&'()*+,-./0123456789:;<=>?@
ABCDEFGHIJKLMNPOQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{ }~

SETUP EDIT MODE

The functions in Setup Edit mode allow you to change voice assignments and other rhythm kit settings. Some of these functions can be used to change pitched voice settings as well.

To edit the currently selected rhythm kit or pitched voice setup, press the [EDIT] key from Play Mode.

The RM50 will enter Setup Edit mode even if a preset rhythm kit or voice is selected, in order to let you view the settings of the preset selections. If you attempt to change these settings, however, it will display an error message stating that you have selected a protected memory bank. Should this happen, press the [EXIT] key to clear the error message. To edit the settings of a preset rhythm kit, you must first copy the kit to the internal (I) or card (C) bank, then edit the copy.

The RM50 will not enter Setup Edit mode at all when the channel mode of the currently selected MIDI channel is set to "off".

To return to Play mode from Setup Edit mode, press either the [EXIT] key or the [PLAY] key.

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Functions in Setup Edit Mode

The functions available in Setup Edit mode are listed below. Once you have entered this mode, you can select any of these functions using the [PAGE+] or [PAGE-] key.

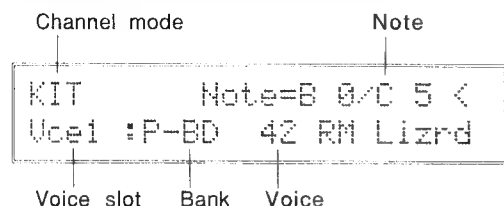
Some of the functions in this mode are not available with the pitched voice channel mode. The availability of each function is noted in the rightmost column of the table.

DISPLAY	DISPLAY NAME	DESCRIPTION	AVAILABILITY
KIT Note=B 0/C 5 < Ucel :P-BD 42 RM Lizr d	1. Voice Assign	Assigns voices to each note of a rhythm kit, or to the entire note range if the pitched voice channel mode has been selected.	RHYTHM KITS & PITCHED VOICES
KIT/ATT Note=B 0/C 5 < Ucel : 0	2. Voice Attenuation	Adjusts the volume either of individual notes in a rhythm kit, or of an entire pitched voice.	RHYTHM KITS & PITCHED VOICES
KIT/Koff Note=B 0/C 5 < Key off message: ignore	3. Key Off	Determines whether the RM50 will recognize received key off messages for the selected rhythm kit note or pitched voice.	RHYTHM KITS & PITCHED VOICES
KIT/PB Note=B 0/C 5 < Range: 0 Sw:off	4. Pitch Bend	Sets the pitch bend range for the selected channel, and enables or disables pitch bend control of the selected rhythm kit note or pitched voice.	RHYTHM KITS & PITCHED VOICES
KIT/Vol Note=B 0/C 5 < off off off off off off	5. Control Change	Specifies which parameters of the voice played by the selected rhythm kit note or pitched voice can be affected by control change, pitch bend, or aftertouch messages.	RHYTHM KITS & PITCHED VOICES
KIT/TriggerNote #1<: Note=A#3(70)	6. Trigger Note Assign	Assigns a rhythm kit note to each of the RM50's six audio trigger inputs.	RHYTHM KITS ONLY
KIT/Name I 1 Rock 1 1	7. Rhythm Kit Name	Assigns a name to the selected rhythm kit.	RHYTHM KITS ONLY
KIT/Init ? I 1 Rock 1	8. Setup Initialize	Initializes all settings of the selected rhythm kit or pitched voice.	RHYTHM KITS & PITCHED VOICES
KIT/Recall ? I 1 Rock 1	9. Setup Recall	Restores the settings of the selected rhythm kit or pitched voice to the values they had prior to editing.	RHYTHM KITS & PITCHED VOICES
KIT/Copy ? to <I 1 Rock 1	10. Rhythm Kit Copy	Copies rhythm kit settings from one bank and kit number to another.	RHYTHM KITS ONLY

1. Voice Assign

RHYTHM KITS & PITCHED VOICES

Summary: Assigns voices to each note of a rhythm kit, or to the entire note range if the pitched voice channel mode has been selected.



Procedure: Use the [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the cursor to the note, voice slot, bank, and voice settings. Use the [+1/YES] or [-1/NO] key to select a different note, voice slot, bank, or voice. (The note and voice slot settings are not available when editing a pitched voice setup.)

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- **Note (B0/C5...B4):** Selects a note from the current rhythm kit. "B0/C5" is displayed when B0 is selected, since the RM50 treats these two as the same note. The note range C-2-C8 is displayed when "VCE" appears as the channel mode; individual notes cannot be selected when the pitched voice channel mode is used.
- **Voice slot (Vce1, Vce2, Vce):** Selects between the two voice slots (Vce1 and Vce2) available for notes from B0/C5 to A#2. When other notes are selected, or when the pitched voice channel mode is used, only one voice slot (Vce) will be available.
- **Bank:** Selects one of 23 voice banks, or "off".
- **Voice:** Selects a voice from the specified bank. The name of the selected voice appears after the voice number.

Notes: When you have selected a rhythm kit note to which more than one voice can be assigned (B0 through A#2), you can switch between the two voice slots (Vce1 and Vce2) by pressing the [SHIFT] and [EDIT] keys. This allows you to make quick changes to the settings for both slots. If you don't want to assign two voices to one of the notes in this range, select "off" as the voice bank for one of the voice slots (Vce1 or Vce2). If you don't want a note to produce any sound at all, turn off all available slots.

When using the pitched voice channel mode, you can change the current voice selection either from this display or from the Play mode display. The results are the same in either case.

The type and number of voices in each bank varies as shown in the following table:

Banks			Description	Voices/bank
Preset	Internal	Card		
	I-MX	C-MX	User voices	128
P-BD	I-BD	C-BD	Bass drums	102
P-SD	I-SD	C-SD	Snare drums	108
P-TM	I-TM	C-TM	Toms	107
P-CY	I-CY	C-CY	Cymbals	65
P-PC	I-PC	C-PC	Percussion	67
P-SE	I-SE	C-SE	Sound effects	51
		W-S1	Wave card 1	32
		W-S2	Wave card 2	32
		W-S3	Wave card 3	32
		off	No selection	—

As this table shows, banks beginning with a "P" contain preset voices. Those beginning with the letters "I" and "C" are internal and data card banks, respectively. The I-MX and C-MX banks contain fully-editable user voices; all other internal and data card banks contain voice variations. Banks beginning with the letter "W" contain wave card voices.

If you continue to press the [+1/YES] or [-1/NO] key when you come to the end of a bank, the display will continue on into the following or preceding bank. The banks are ordered as listed in the columns of the table above.

SETUP EDIT MODE

The message "No Card!" will appear instead of a rhythm kit or voice name if you attempt to select a data card or wave card bank without first inserting a card in the appropriate slot.

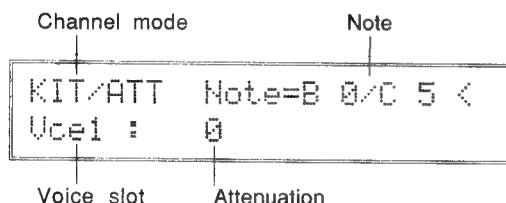
A complete listing of all the RM50's preset voices is presented in the Appendix on page 114.

You can press the [EDIT] key from this display to enter Voice Edit mode and edit the currently selected voice.

2. Voice Attenuation

RHYTHM KITS & PITCHED VOICES

Summary: Adjusts the volume either of individual notes in a rhythm kit, or of an entire pitched voice.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the note or voice slot settings or the attenuation parameter. Use the [+1/YES] or [-1/NO] key to select a different note or voice slot, or to change the attenuation value for the selected note. (The note and voice slot settings are not available when editing a pitched voice setup.)

- **Attenuation (0...15):** Sets the amount by which the volume of the voice is reduced from its standard level.

Note: The adjustment of the balance between the various instruments in a rhythm kit should be done using this setting rather than the volume parameter described on page 72. This is because there may be instances in which you want a particular instrument to play loudly in one rhythm kit, and more quietly in another.

When you have selected a note to which more than one voice can be assigned (B0 through A#2), you can switch between the two voice slots (Vce1 and Vce2) by pressing the [SHIFT] and [EDIT] keys. This feature allows you to make quick changes to the attenuation settings for both voice slots.

You can also use the Attenuation function to balance the volume of a pitched voice against the rhythm sets and voices played by other channels.

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- **Note (B0/C5...B4):** Selects a note from the current rhythm kit. "B0/C5" is displayed when B0 is selected, since the RM50 treats these two as the same note. The note range C-2-C8 is displayed when "VCE" appears as the channel mode.
- **Voice slot (Vce1, Vce2, Vce):** Selects between the two voice slots (Vce1 and Vce2) available with notes from B0/C5 to A#2. When other notes are selected, or when the pitched voice channel mode is used, only one voice slot (Vce) is available.

3. Key Off

RHYTHM KITS & PITCHED VOICES

Summary: Determines whether the RM50 will recognize received key off messages for the selected rhythm kit note or pitched voice.

Channel mode Note

```

KIT/Koff Note=B 0/C 5 <
Key off message: ignore
  
```

Key off message

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer between the note and key off message settings. Use the [+1/YES] or [-1/NO] key to select a different note, or to change the key off message setting. (The note setting is not available when editing a pitched voice setup.)

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).

- **Note (B0/C5...B4):** Selects a note from the current rhythm kit. "B0/C5" is displayed when B0 is selected, since the RM50 treats these two as the same note. The note range C-2-C8 is displayed when "VCE" appears as the channel mode.
- **Key off message (accept, ignore):** Determines whether the RM50 will comply with or ignore any key off messages it receives for the selected note. (When the pitched voice channel mode is used, this setting applies to the entire note range.)

Note: The "accept" setting enables a voice's release rate setting. Generally, you should use this setting to control the length of notes played by pitched voices such as bass guitars and other melodic instruments. The "ignore" setting, which disables the voice's release rate setting and causes key off messages to be ignored, is appropriate for most percussion instruments, which have fixed note lengths.

4. Pitch Bend

RHYTHM KITS & PITCHED VOICES

Summary: Sets the pitch bend range for the selected channel, and enables or disables pitch bend control of the selected rhythm kit note or pitched voice.

Channel mode Note

```

KIT/PB Note=B 0/C 5 <
Range: 0 Sw:off
  
```

Pitch bend range Pitch bend switch

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the note, pitch bend range, and pitch bend switch settings. Use the [+1/YES] or [-1/NO] key to select a different note, or to change the pitch bend range and switch settings.

(The note setting is not available when editing a pitched voice setup.)

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- **Note (B0/C5...B4):** Selects a note from the current rhythm kit. (The note range C-2-C8 is displayed when "VCE" appears as the channel mode.)
- **Pitch bend range (0...12):** Sets the range, in half steps, over which received pitch bend messages can control the pitch of notes on the current channel. When this parameter is set to 12, the pitch can be bent up or down as much as one octave. When it is sent to 0, received pitch bend messages will have no effect.

SETUP EDIT MODE

- **Pitch bend switch (on, off):** Determines whether the RM50 will respond to pitch bend information for the selected note. (When the pitched voice channel mode is used, this setting applies to the entire note range.)

Note: It is important to note with respect to this function that while the pitch bend switch enables or disables the reception of pitch bend information for individual notes in a rhythm kit, the pitch bend range setting applies to all of the notes in the kit. The pitch bend range setting is the only setting which applies to all the notes in a rhythm kit.

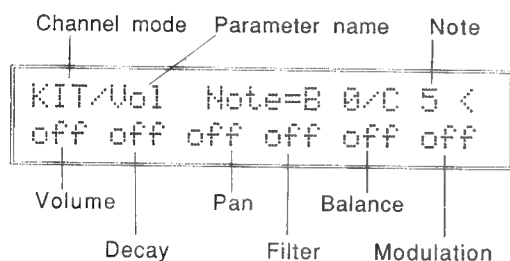
You can assign pitch to be controlled by control change or aftertouch messages rather than pitch bend messages using the Control Change Assign function of the MIDI Utility group (see page 99).

The RM50 will respond to no control change, pitch bend, or aftertouch messages if the Control Change function, also found in the MIDI Utility group, is turned off (see page 98).

5. Control Change

RHYTHM KITS & PITCHED VOICES

Summary: Specifies which parameters of the voice played by the selected rhythm kit note or pitched voice can be affected by control change, pitch bend, or aftertouch messages.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the note setting or among the parameter settings in the lower row of the LCD. Use the [+1/YES] or [-1/NO] key to select a different note or change the voice parameter settings. (The note setting is not available when editing a pitched voice setup.)

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- **Parameter name (Vol, Dcy, Pan, Fil, Bal, Mod):** Shows the name of the voice parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.

- **Note (B0/C5...B4):** Selects a note from the current rhythm kit. (The note range C-2-C8 is displayed when "VCE" appears as the channel mode.)
- **Volume (off, on):** Determines whether the volume of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.
- **Decay (off, on):** Determines whether the decay of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.
- **Pan (off, on):** Determines whether the panning of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.
- **Filter (off, on):** Determines whether the filter cutoff frequency of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.
- **Balance (off, on):** Determines whether the balance of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.
- **Modulation (off, on):** Determines whether the LFO modulation depth of the voice played by the selected rhythm kit note or pitched voice can be affected by control change messages.

Note: The control change parameters can be enabled and disabled individually for each of the notes in a rhythm kit. When the pitched voice channel mode is used, the settings apply to the entire note range.

You can alter the control change number assignments for these six parameters, or assign them to be controlled by pitch bend or aftertouch

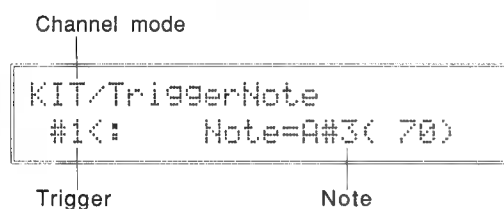
messages instead, using the Control Change Assign function of the MIDI Utility group (see page 99).

The RM50 will respond to no control change, pitch bend, or aftertouch messages if the Control Change function, also found in the MIDI Utility group, is turned off (see page 98).

6. Trigger Note Assign

RHYTHM KITS ONLY

Summary: Assigns a rhythm kit note to each of the RM50's six audio trigger inputs.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer between the trigger and note settings. Use the [+1/YES] or [-1/NO] key to select a different trigger, or to assign a different note to the selected trigger.

- **Trigger (#1...#6):** Selects one of the RM50's six audio trigger inputs.
- **Note (B0/C5...B4):** Selects a note from the current rhythm kit.

Notes: This function simply assigns a rhythm kit note to each of the RM50's audio trigger input jacks. Detailed parameters controlling the audio-to-MIDI converter are available as Utility mode functions (pages 92 to 94).

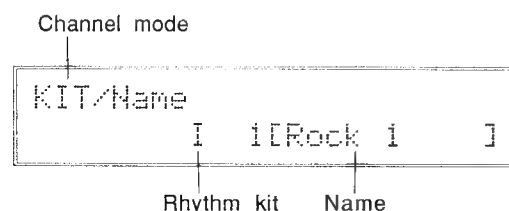
A line of dashes is displayed in the lower row of the LCD when "VCE" appears as the channel mode. When the channel mode is set to "pitched voice" or "off" in Play mode, the trigger inputs will play the notes assigned to them by the Trigger Input 3 function in the System Utility group (see page 93).

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).

7. Rhythm Kit Name

RHYTHM KITS ONLY

Summary: Assigns a name to the selected rhythm kit.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to select the character you wish to change (the selected character will blink). Then use the [+1/YES] or [-1/NO] key to change the selected character.

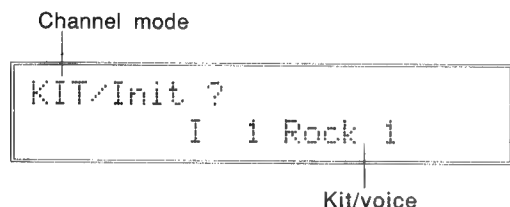
- *Channel mode (KIT, VCE)*: Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- *Rhythm kit*: Indicates the bank and number of the rhythm kit to be named. The rhythm kit selection cannot be changed using this display.
- *Name*: Allows you to assign the selected rhythm kit a name of up to ten characters. The available characters are the same as those listed for the Macro Name function on page 54.

Note: A line of dashes is displayed in the lower row of the LCD when "VCE" appears as the channel mode. It is not possible to name a pitched voice in Setup Edit mode, since pitched voices automatically use the name of the voice assigned to them using the Voice Assign function (see page 59).

8. Setup Initialize

RHYTHM KITS & PITCHED VOICES

Summary: Initializes all settings of the selected rhythm kit or pitched voice.



- *Kit/voice*: Indicates the bank, number, and name of the rhythm kit or pitched voice to be initialized. The rhythm kit or pitched voice selection cannot be changed using this display.

Notes: When you initialize a rhythm kit, the name of the kit will remain unchanged. The kit's other settings will be given the default values listed below.

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Press the [SHIFT] and [+1/YES] keys to initialize all note and channel settings for the selected rhythm kit or pitched voice. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the initialize operation.

FUNCTION	SETTINGS
Voice Assign	off
Voice Attenuation	0
Key Off	ignore
Pitch Bend	Range: 0, Sw: off
Control Change	off off off off off off
Trigger Note Assign	B0/C5

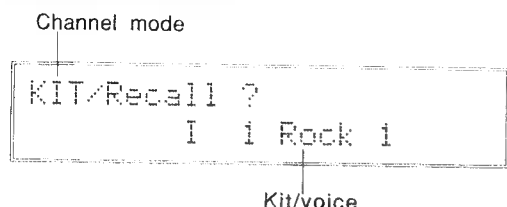
- *Channel mode (KIT, VCE)*: Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).

When you initialize a pitched voice, the Voice Assign selection will remain unchanged. All other Setup Mode settings available with pitched voices (i.e., the Key Off, Pitch Bend, and Control Change settings) will be set to the same values as those listed above for rhythm kits.

9. Setup Recall

RHYTHM KITS & PITCHED VOICES

Summary: Restores the settings of the selected rhythm kit or pitched voice to the values they had prior to editing.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Press the [SHIFT] and [+1/YES] keys to restore all channel and note settings for the selected rhythm kit or pitched voice to the condition they had prior to editing. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the recall operation. Repeat the last two steps, if desired, to return to the edited settings.

- **Channel mode (KIT, VCE):** Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- **Kit/voice:** Indicates the bank, number, and name of the rhythm kit or pitched voice to be recalled. The rhythm kit or pitched voice selection cannot be changed using this display.

Notes: Whenever you edit a rhythm kit or pitched voice, the first letter of the channel mode indicator will change to a small letter (i.e., "kIT" or "vCE") to remind you that the data has been edited. The RM50 will save the unedited data in a memory area known as the "recall buffer" even if you turn the power off. If you decide you don't like the changes you've made, you can use the Recall function to restore the original data.

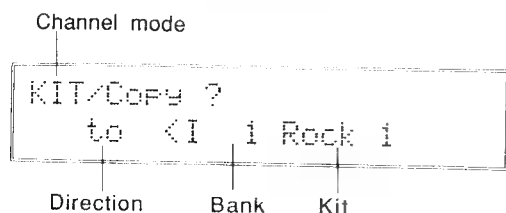
When you use the Recall function to recall the old data for a rhythm kit or pitched voice, the edited data will take its place in the recall buffer. This means you can use the recall buffer to switch back and forth between the new and old settings, to compare the sounds they produce.

Once you begin editing another rhythm kit or pitched voice, however, all data for the previous kit or pitched voice will be cleared from the buffer, and the currently recalled settings will become permanent. The channel mode indicator will again begin with a capital letter ("KIT" or "VCE") the next time you select that rhythm kit or pitched voice, indicating that it is no longer possible to recall the old data.

10. Rhythm Kit Copy

RHYTHM KITS ONLY

Summary: Copies rhythm kit settings from one bank and kit number to another.



Procedure: Use the [PAGE+] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the direction, bank, and kit settings. Use the [+1/YES] or [-1/NO] key to change these settings. Press the [SHIFT] and [+1/YES] keys to copy the rhythm kit. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the copy operation.

SETUP EDIT MODE

- *Channel mode (KIT, VCE)*: Indicates which channel mode has been selected. This setting can only be changed from the Play mode display (page 51).
- *Direction (to, from)*: Determines whether the RM50 will copy the currently selected rhythm kit to another bank and kit number, or whether it will copy the data from another kit to the currently selected bank and kit number.
- *Bank (P, I, C)*: Selects one of three rhythm kit banks.
- *Kit (1...64)*: Selects a rhythm kit number from the specified bank. The name of the selected kit appears after the kit number.

Notes: *This function is useful when you want to create a slightly edited version of an existing rhythm kit. Do not select the preset bank (P) if you have selected "to" as the direction, or an error message will appear when you attempt to copy the data.*

When you use the "from" setting to copy kit data to the current bank and kit numbers, all of the current kit settings will be replaced by the copied data. However, you can still restore the original settings using the Setup Recall function described on page 65.

If you use the "to" setting to copy rhythm kit data, recall of the replaced data will be impossible.

A line of dashes will be displayed in the lower row of the LCD when "VCE" appears as the channel mode. The rhythm kit copy function is not available when the pitched voice channel mode is used.

VOICE EDIT MODE

The Voice Edit mode functions let you modify the voices which have been assigned to rhythm kit notes or selected as pitched voices in Setup Edit mode. The changes you make to a voice in this mode will affect all rhythm kits or pitched voice setups which use the voice.

Any voice that you wish to edit must first be assigned to a rhythm kit note or select as a pitched voice by the Voice Assign display in Setup Edit mode (see page 59). Select the note or pitched voice in this display, then press the [EDIT] key to shift to Voice Edit mode.

The RM50 will enter Voice Edit mode while a preset voice is selected, in order to let you observe the contents of the preset selections. If you try to change any of the parameter values, however, it will display an error message stating that you have selected a protected memory bank. Should this happen, press the [EXIT] key to clear the error message.

If a few simple edits will suffice, you may want to try editing a corresponding voice variation from the appropriate internal (I) or card (C) bank. If you wish make more drastic changes to a preset voice, first copy the desired voice to the internal or card user memory bank (I-MX or C-MX), then edit the copy.

The RM50 will not enter Voice Edit mode at all if the voice assignment for the current rhythm kit note is set to "off".

To return to Setup Edit mode from Voice Edit mode, press the [EXIT] key. To return directly to Play mode, either press the [EXIT] key twice, or press the [PLAY] key.

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Functions in Voice Edit Mode

The functions available in Voice Edit mode are listed below. Once you have entered this mode, you can select any of these functions using the [PAGE+] or [PAGE-] keys.

None of the functions in this mode can be used to edit preset voices. (You can use the Voice Copy function to copy preset voice data to a user voice.) Many of the functions listed below are only available when editing user voices (those in the I-MX and C-MX banks). The availability of each function is noted in the rightmost column of the table.

DISPLAY	DISPLAY NAME	DESCRIPTION	AVAILABILITY
U/Easy/Vol [RM Lizr _d] ₁₂ 127< +0 +0	1. Easy Edit 1	Sets the voice's overall volume, balance, and panning.	VOICE VARIATIONS & USER VOICES
U/Easy/Pch [RM Lizr _d] ₁₂ +0< +0 +0	2. Easy Edit 2	Sets a voice's overall pitch, decay, and filter offsets.	VOICE VARIATIONS & USER VOICES
U/Wave/Mem [RM Lizr _d] ₁₂ P<002:BDDryH	3. Waveform Select	Selects an AWM2 waveform to be played by the selected voice element, and the direction in which it waveform is to be played.	USER VOICES ONLY
U/Level [RM Lizr _d] ₁₂ 63< (.....)16 -0400	4. Element Level, Pan, and Pitch	Sets the basic level, panning, and pitch of the selected voice element.	USER VOICES ONLY
U/EG/Attack [RM Lizr _d] ₁₂ 0< 50 16 1	5. Element EG	Determines the shape of the level envelope generator for the selected voice element.	USER VOICES ONLY
U/F1/Type [RM Lizr _d] ₁₂ THRU <----- 0 0 +0	6. Element Filter	Sets the filter response type, cutoff frequency, resonance, and EG parameters for the selected voice element.	USER VOICES ONLY
U/LFO/Des _t [RM Lizr _d] ₁₂ off/tri 0 0 0 0	7. Element LFO	Specifies how the LFO (low frequency oscillator) modulates the selected voice element.	USER VOICES ONLY
U/Sens/Lv ₁ [RM Lizr _d] ₁₂ +7< +0 +0 +0 0	8. Element Sensitivity	Determines how deeply the output level, pitch, EG, and filter cutoff frequency of the selected voice element change in response to changes in note velocity, and how deeply the LFO changes in response changes in note modulation.	USER VOICES ONLY
U/PEG/Rate [RM Lizr _d] ₁₂ 0< +0	9. Element Pitch EG	Determines the shape of the pitch EG (envelope generator) for the selected voice element.	USER VOICES ONLY

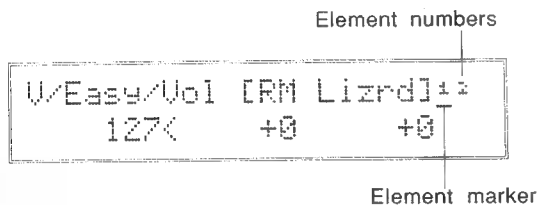
VOICE EDIT MODE

DISPLAY	DISPLAY NAME	DESCRIPTION	AVAILABILITY
U/Dly/Reps [RM Lizr d] ₁₂ off<off 1 +0 +00.0	10. Element Delay	Specifies whether and how the repeated delay effect will be applied to the selected voice element.	
U/VelCurve [RM Lizr d] ₁₂ 1:Linear <	11. Element Velocity Curve	Specifies how the element will interpret received note velocity information.	USER VOICES ONLY
U/Assign [RM Lizr d] ₁₂ poly<off stereo 63	12. Voice Output	Determines whether the selected voice is to be played as a monophonic or polyphonic voice, specifies whether it is to be alternated with any other voices, and assigns it to the RM50's stereo or individual output jacks.	USER VOICES ONLY
U/Name [RM Lizr d] ₁₂ Voice Name =[RM Lizr d]	13. Voice Name	Assigns a name to the selected voice.	USER VOICES ONLY
U/Init? I-MX 42 RM Lizr d	14. Voice Initialize	Initializes all parameter settings of the selected voice.	USER VOICES ONLY
U/Recall? I-MX 42 RM Lizr d	15. Voice Recall	Restores the parameters of the selected voice pitched voice to the values they had prior to editing.	VOICE VARIATIONS & USER VOICES
U/Copy? to <I-MX 42 RM Lizr d	16. Voice Copy	Copies voice parameters from one bank and voice number to another.	ALL VOICES

Element Select

VOICE VARIATIONS & USER VOICES

When you edit a voice, a pair of small numerals (1 and 2) representing the voice's two elements will appear in the upper right corner of the LCD, after the voice's name. One of the numerals will be underlined by an element marker, as shown in the LCD below.



This marker indicates which of the two elements is currently selected for editing. You can move the

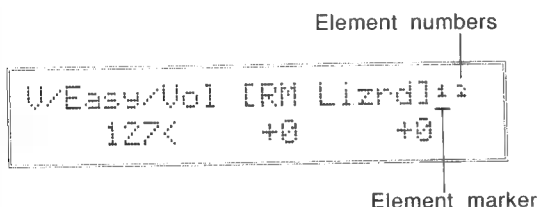
marker to the other element number, and thus display the parameter values for that element, by pressing the [SHIFT] and [EDIT] keys. (The display will not change when the displayed parameters affect the voice as a whole rather than individual elements.) This handy feature allows you to make quick changes to both of a voice's elements.



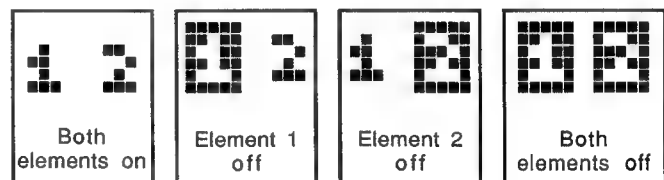
Element On/Off

VOICE VARIATIONS & USER VOICES

It is possible to turn either or both of a voice's elements off when editing the voice's parameters. The element numbers described for the Element Select function above are normally displayed as dark characters on a light background, like the rest of the characters in the display, when the element is turned on.



You can switch Element 1 on or off by pressing the [SHIFT] and [PAGE-] keys. To switch Element 2 on or off, use the [SHIFT] and [PAGE+] keys. When you turn an element off, the element number will be reversed, appearing as a light number on a dark background.

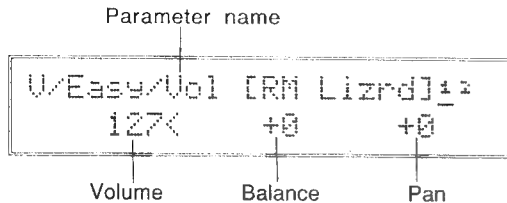


You can use this function to temporarily switch one element off when editing a two-element voice in order to get an idea how the changes you make are affecting the sound produced by an element. If you turn both elements off, the voice will of course produce no sound at all.

1. Easy Edit 1

VOICE VARIATIONS & USER VOICES

Summary: Sets the voice's overall volume, balance, and panning.



Procedure: Use the [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the volume, balance, and pan parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Vol, Bal, Pan):** Shows the name of the voice parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Volume (0...127):** Sets the voice's overall volume. The voice becomes louder as this value is increased. It produces no sound whatsoever with a value of 0.

- **Balance (-64...+64):** Adjusts the balance between the voice's two elements. Negative values raise the volume of Element 1; positive values raise the volume of Element 2. Changes to this setting will not affect voices that use only one element.
- **Pan (-32...+32):** Adjusts the voice's panning. Negative values move the voice's stereo position to the left; positive values move it to the right.

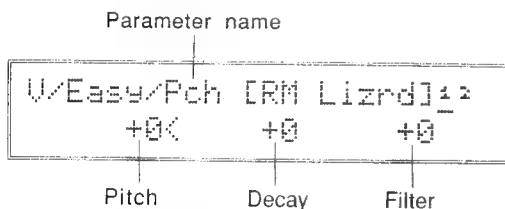
Notes: The balance and pan parameters are offsets which adjust the level and pan values set for individual elements using parameters available with the Element Level, Pan, and Pitch function described on page 74.

The pan setting will have no effect if you assign the voice to one of the INDIVIDUAL OUTPUT jacks using the Voice Output function described on page 82.

2. Easy Edit 2

VOICE VARIATIONS & USER VOICES

Summary: Sets a voice's overall pitch, decay, and filter offsets.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the pitch, decay, and filter parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Pch, Dcy, Fil):** Shows the name of the voice parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Pitch (-64...+64):** Adjusts the voice's pitch. Positive values raise the voice's pitch; negative values lower it. The maximum and minimum settings of +64 and -64 raise or lower the pitch voice by one full octave.
- **Decay (-64...+64):** Adjusts the voice's decay. Positive values lengthen the decay time; negative values shorten it.

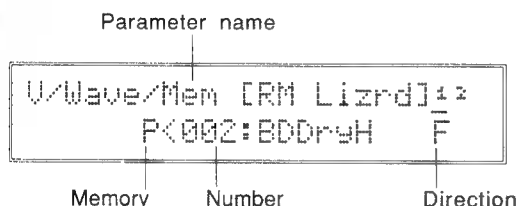
- **Filter (-64...+64):** Adjusts the filter cutoff frequency. Positive values raise the cutoff frequency, making the voice brighter; negative values lower it, making the voice darker. This setting will have no effect on voices which do not have filtered elements.

Note: These parameters are offsets which adjust the pitch, decay, and pan values set individually for the voice's elements using parameters available with the Element Level, Pan, and Pitch function (page 74), the Element EG function (page 75), and the Element Filter function (page 76).

3. Waveform Select

USER VOICES ONLY

Summary: Selects an AWM2 waveform to be played by the selected voice element, and the direction in which it waveform is to be played.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the memory, number, and direction parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Mem, Num, Dir):** Shows the name of the element parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Memory (P, W1, W2, W3, I):** Selects a waveform memory location. Select "P" to use one of the RM50's preset waveforms, "I" to use a waveform which you have copied into the optional wave RAM, and "W1", "W2" or "W3" to use a waveform from a wave card in the corresponding WAVEFORM slot. You can also set the memory parameter for Element 2 to "off" when creating a voice that uses only one element.
- **Number:** Selects a waveform from the selected waveform memory area. The name of the waveform will be displayed after the number.

- **Direction (F, R):** Specifies the direction in which the selected waveform is to be played. Select "F" to play the waveform normally, or "R" to play it in reverse.

Notes: If you select a card memory location (W1, W2, or W3) corresponding to a WAVEFORM slot in which no card is inserted, a row of asterisks will appear in the place of the waveform name. The same row of asterisks will appear if you select the internal memory location (I) while the wave RAM is empty.

The message "Not Asgn!" will be displayed instead of a waveform name if you insert a wave card in one of the WAVEFORM slots while a card memory is selected. Should this happen, press the [+1/YES] or the [-1/NO] key to clear the error message, then select the appropriate memory location.

If, after selecting a waveform from a wave card, you remove the wave card from its WAVEFORM slot – or if you display the Waveform Select function while editing a voice using such a waveform without inserting the right wave card in one of the WAVEFORM slots – the name of the wave card (i.e., "RSC3071") will appear in place of the waveform name. Insert the specified card in one of the WAVEFORM slots to use the previously selected waveform, or press the [+1/YES] or the [-1/NO] key to clear the error message and select a new memory area and waveform.

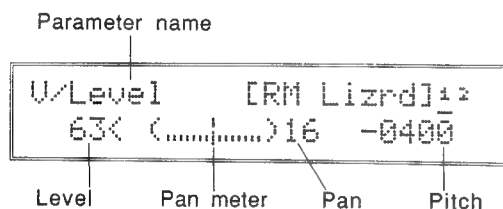
Once you have created a voice using a waveform from a wave card (memory locations W1, W2, or W3), the wave card in question must be inserted in the one of the RM50's three WAVEFORM slots in order for the voice to produce any sound. Likewise, a voice which has been set to use a waveform from the internal (I) memory will fail to produce any sound if the waveform in question is subsequently erased from the wave RAM using the Waveform Delete function (see page 106).

For details on the use of the internal waveform memory, please refer to the description of the wave RAM option on pages 35 through 37.

4. Element Level, Pan, and Pitch

USER VOICES ONLY

Summary: Sets the basic level, panning, and pitch of the selected voice element.



- **Pitch** (-3600...+3600): Sets the element's pitch, in units of one cent. Positive values raise the waveform's basic pitch; negative values lower it.

Notes: When you use the [+1/YES] or [-1/NO] key to adjust the pitch, the value will change in one-cent units. You can also raise or lower the pitch in units of 100 cents by pressing the [+1/YES] or [-1/NO] key while holding down the [SHIFT] key.

The pan setting will have no effect if you assign the voice to one of the INDIVIDUAL OUTPUT jacks using the Voice Output function described on page 82.

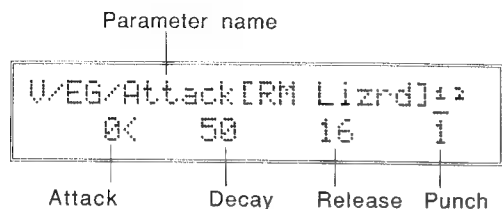
Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the level, pan, and pitch parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Level, Pan, Pitch):** Shows the name of the element parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Level (0...63):** Sets the element level. The element becomes louder as this value is raised. It produces no sound whatsoever with a value of 0.
- **Pan meter:** Displays the element panning graphically. The stereo position of the element, indicated by the location of the mark above the meter, changes as you adjust the value of the pan parameter.
- **Pan (0...32):** Sets the element's panning. Lower values move the voice's stereo position to the left; higher values move it to the right. The element will be centered with a value of 16.

5. Element EG

USER VOICES ONLY

Summary: Determines the shape of the level EG (envelope generator) for the selected voice element.

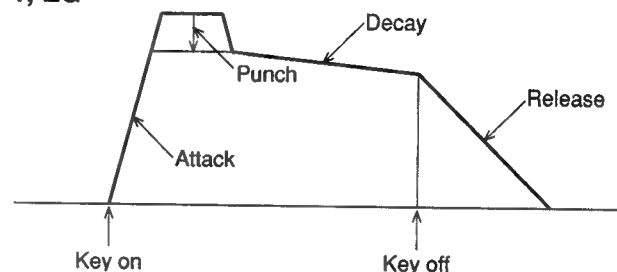


Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the attack, decay, release, and punch parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Attack, Decay, Release, Punch):** Shows the name of the element EG parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Attack (0...63):** Sets the speed at which the element's output rises from 0 to its maximum level after a note on message is received. The attack time increases as this value is raised.
- **Decay (0...63):** Sets the speed at which the element's output falls from its maximum level. The decay time increases as this value is raised.
- **Release (0...63):** Sets the speed at which the element's output drops to 0 after a key off message is received. The release time increases as this value is raised. (This setting has no effect on voices played by rhythm kit notes or pitched voices for which the RM50 has been set to ignore key off messages.)
- **Punch (0...7):** Sets an amount of time for which the element's attack level is held at the onset of a note. The attack of the element becomes more emphatic as this value is raised.

Notes: The Element EG parameters affect the output of the selected element as shown in the illustration below.

1, EG



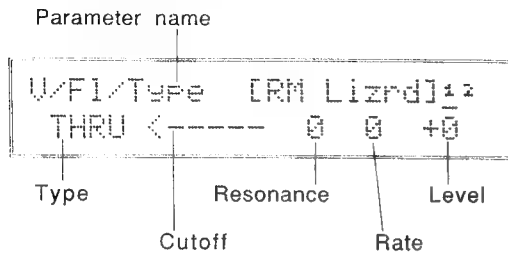
When a note message is received, the element's output will rise at the rate ($R1$) set by the attack parameter to the maximum output level specified using the Element Level, Pan, and Pitch function described on the preceding page. If a punch value has been set, the maximum output level will be increased by this value for a fixed time at the onset of the note. The level will then drop at the rate ($R2$) set by the decay parameter until a key message is received, from which point it will drop at the release rate ($R3$) to 0.

The release time setting has no effect on a voice when the RM50 is set to ignore key off messages for a note (or channel) playing that voice. In such an instance, the level of the note will continue to fall at the rate ($R2$) set by the decay parameter, until it reaches 0.

6. Element Filter

USER VOICES ONLY

Summary: Sets the filter response type, cutoff frequency, resonance, and EG parameters for the selected voice element.



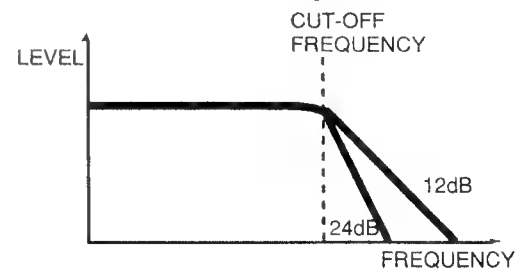
Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the type, cutoff, resonance, rate, and level parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Type, Cutoff, Reso, Rate, Level):** Shows the name of the element filter parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Type (THRU, LPF12, LPF24, HPF12, HPF24):** Specifies the type of filter response applied to the element. The "THRU" setting turns the filter off. The different filter response types are described in detail in the notes below.
- **Cutoff:** Sets the point at which the filter begins to reduce frequencies passed. This parameter can be set to a value from 0.00 to 22.4 kHz when an LPF response is selected, or from 0.00 to 11.7 kHz when an HPF response is used.
- **Resonance (0...99):** Sets the degree of filter resonance produced when filtering the element with a low pass filter. Higher settings result in greater resonance. This parameter has no effect when the "THRU", "HPF12", or "HPF24" filter types are selected.
- **Rate (0...63):** Sets the rate of the change created by the filter EG. The speed of the filter sweep increases as this value is raised.

- **Level (-63...63):** Sets an amount by which the filter EG alters the cutoff frequency. Positive values raise the cutoff value; negative values lower it.

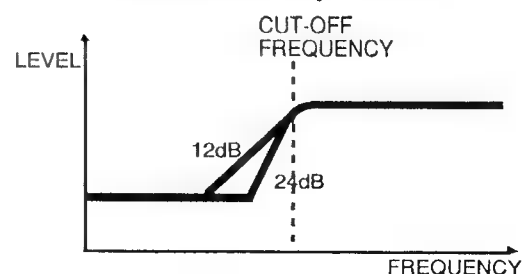
Notes: The LPF type settings produce a filter response that allows only frequencies below the cutoff frequency to pass. The "LPF12" setting has a 12dB per octave cutoff slope; the "LPF24" setting has a steeper 24dB per octave slope. With this response type, a lower cutoff frequency reduces the range of high frequencies passed, making the sound "darker" or "rounder."

Low Pass Filter Response



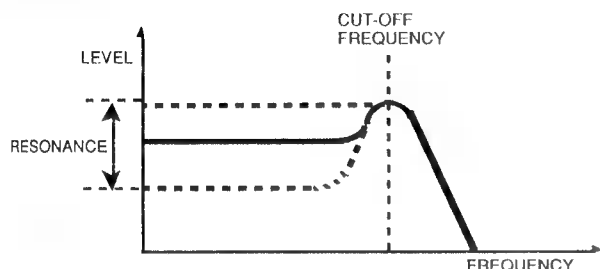
The HPF type settings produce a filter response that allows only frequencies above the cutoff frequency to pass. The "HPF12" setting has a 12dB per octave cutoff slope, and the "HPF24" setting has a steeper 24dB per octave slope. With this response type, a higher cutoff frequency reduces the range of low frequencies passed, making the sound "thinner" or "sharper."

High Pass Filter Response



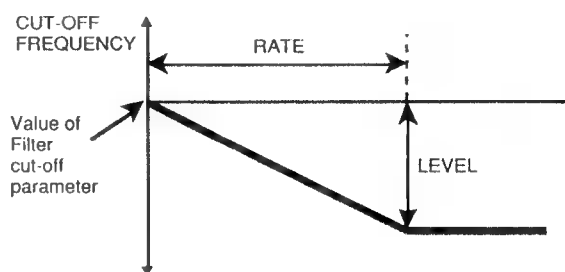
The resonance parameter has a similar effect to the "resonance" settings on traditional analog synthesizer filters: it determines the height of a peak in the filter response at the cutoff frequency. Higher values produce a higher resonant peak, emphasizing a narrow band of frequencies at the filter cutoff.

RESONANCE



The level and rate parameters define the shape of the filter EG which alters the filter response at the onset of a note. The level parameter determines how far the filter EG will raise or lower the cutoff frequency. The "rate" parameter determines how fast the filter will sweep from the normal cutoff frequency to the frequency determined by the level parameter. A rate setting of 63 produces an almost instantaneous sweep; the minimum setting of 0 produces the slowest change.

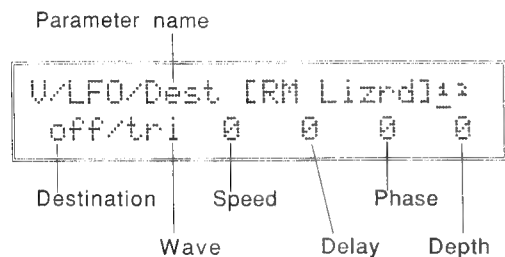
Filter EG



7. Element LFO

USER VOICES ONLY

Summary: Specifies how the LFO (low frequency oscillator) modulates the selected voice element.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the destination, wave, speed, delay, phase, and depth parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

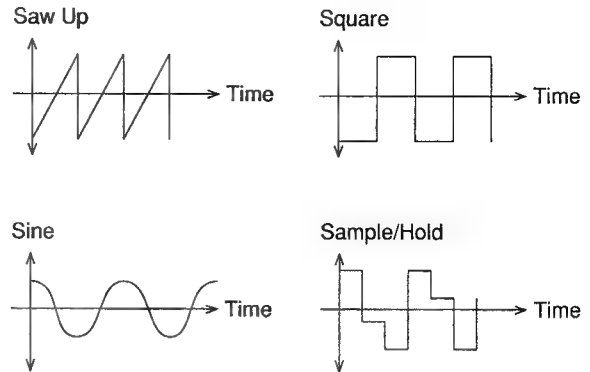
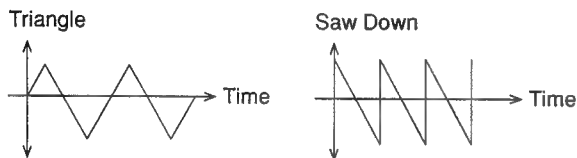
- **Parameter name (Dest, Wave, Speed, Delay, Phase, Depth):** Shows the name of the element LFO parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.

- **Destination (off, amp, pch, fil):** Selects the element component which the LFO is to modulate. Apply the LFO to the element amplifier (amp) for a tremolo effect, or to pitch (pch) to produce vibrato. Selecting the filter cutoff frequency (fil) as the destination will only produce an effect on elements which are filtered using the Element Filter function described above. Setting "off" as the destination will disable LFO modulation, in which case all of the following parameters will be ignored.
- **Wave (tri, dwn, up, squ, sin, S/H):** Selects the shape of the waveform produced by the LFO. The shape of each waveform type is shown in the note below.
- **Speed (0..99):** Sets the speed of LFO modulation. Higher settings result in faster modulation.
- **Delay (0..99):** Sets the delay time before modulation begins. The delay time becomes longer as this value is raised.

VOICE EDIT MODE

- **Phase (0...63):** Sets the point of the LFO wave from which the LFO will begin modulating at the onset of a note.
- **Depth (0...127):** Sets the LFO modulation depth, which determines how greatly the LFO will affect the element level, pitch, or filter cutoff frequency.

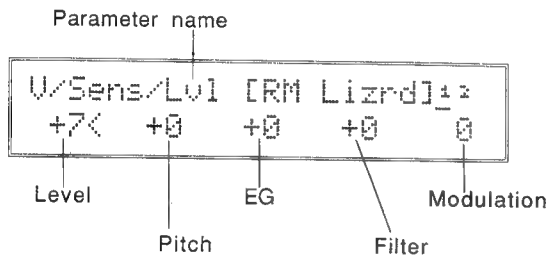
Note: The RM50 allows you to select from the six LFO waveform shapes depicted below:



8. Element Sensitivity

USER VOICES ONLY

Summary: Determines how deeply the output level, pitch, EG, and filter cutoff frequency of the selected voice element change in response to changes in note velocity, and how deeply the LFO changes in response changes in note modulation.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the level, pitch, EG, filter, and modulation parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

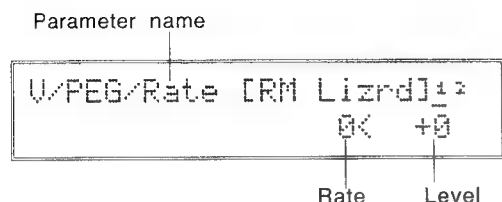
- **Parameter name (Lvl, Pch, EG, Fil, Mod):** Shows the name of the element sensitivity parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.

- **Level (-7...+7):** Specifies how the element's output level changes in response to changes in note velocity. Positive values increase the output volume; negative values lower it. A setting of +0 results in no output level variation.
- **Pitch (-7...+7):** Specifies how the element's pitch changes in response to changes in note velocity. Positive values raise the pitch; negative values lower it. A setting of +0 results in no pitch variation.
- **EG (-7...+7):** Specifies how the element's EG changes in response to changes in note velocity. Positive values produce a faster attack and a slower decay; negative values produce slower attack and a faster decay. A setting of +0 results in no EG variation.
- **Filter (-7...+7):** Specifies how the element's filter cutoff frequency changes in response to changes in note velocity. Positive values raise the cutoff frequency; negative values lower it. A setting of +0 results in no cutoff frequency variation.
- **Modulation (0...+7):** Specifies how deeply the element's LFO modulation will change in response to changes in note modulation. The depth of the modulation response increases as this value is raised.

9. Element Pitch EG

USER VOICES ONLY

Summary: Determines the shape of the pitch EG (envelope generator) for the selected voice element.

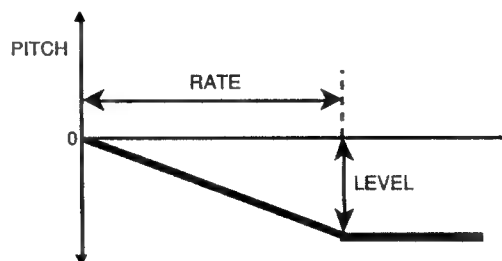


Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer between the rate and level parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Rate, Level):** Shows the name of the element pitch EG parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Rate (0...63):** Sets the rate of the change created by the pitch EG. The speed of the pitch change increases as this value is raised.
- **Level (-72...72):** Sets an amount by which the pitch EG alters the element pitch. Positive values raise the pitch; negative values lower it.

Note: The pitch EG alters the element's pitch at the onset of a note. The level parameter determines how far the pitch EG will raise or lower the pitch. The "rate" parameter determines how fast the pitch will sweep from the normal value to the value determined by the level parameter. A rate setting of 63 produces an almost instantaneous sweep; the minimum setting of 0 results in no change.

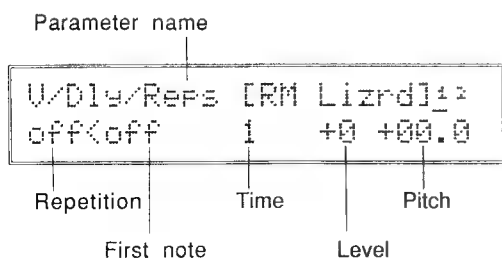
Pitch EG



10. Element Delay

USER VOICES ONLY

Summary: Specifies whether and how the repeated delay effect will be applied to the selected voice element.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the repetition, first note, time, level, and pitch parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

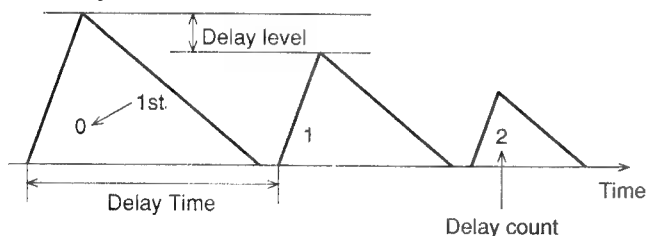
- **Parameter name (Reps, 1st, Time, Level, Pitch):** Shows the name of the element delay parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.

VOICE EDIT MODE

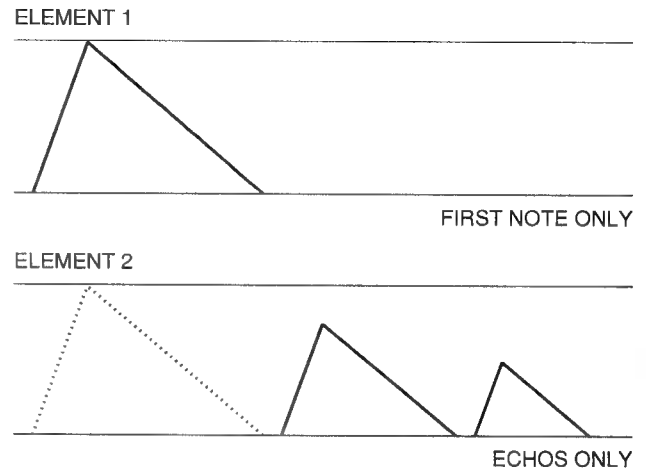
- *Repetition (off, 1...7)*: Sets the number of delay repetitions to follow the first note. Up to seven repetitions can be specified. If you set this parameter to "off", the settings of all other parameters in this display will be ignored.
- *First note (off, on)*: Switches the initial note (the note which is actually received as a note on message) on or off. When this parameter is set to "off", the RM50 will play the delayed echoes of the note, but not the note they are echoing. Some applications of this function are described in the notes below.
- *Time (1...128)*: Sets the delay time between delay repetitions, in units of 10 msec.
- *Level offset (-7...+7)*: Sets the amount by which the element output level changes with each repetition. Positive values increase the level cumulatively; negative values decrease it cumulatively. The output level will remain constant when a value of +0 is set.
- *Pitch offset (-12.0...+12.0)*: Sets the amount by which the element pitch changes with each repetition. Positive values raise the pitch of each repetition; negative levels decrease it. The maximum and minimum settings of +12.0 and -12.0 raise or lower the pitch voice by one full octave. The pitch remains constant when a value of +0.00 is set.

Notes: When using this function, you will usually want to set a negative value for the level offset parameter to create a series of diminishing echoes similar to those commonly produced by digital delay units.

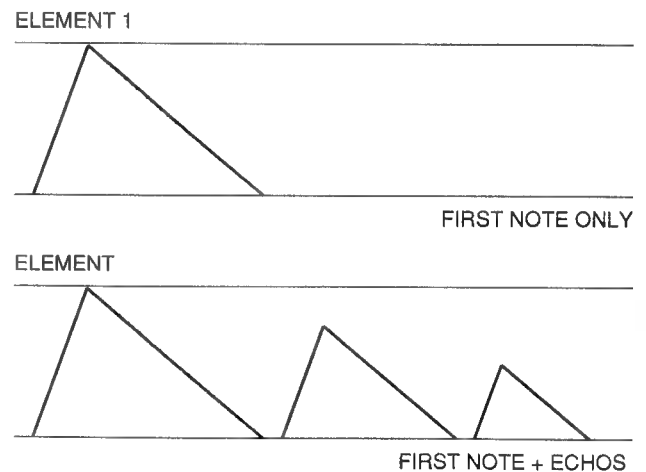
2, Delay



The first note setting lets you turn off the initial note, to produce a series of disconnected echoes. When editing a voice with two elements, you can create an interesting effect by playing the initial note with one element, and the delay echoes with the other.



As a variation on this idea, you can have both elements play the initial note, but only one of them play the echoes.



By adjusting the value of the pitch offset parameter, you can create some very interesting effects.

11. Element Velocity Curve

USER VOICES ONLY

Summary: Specifies how the element will interpret received note velocity information.

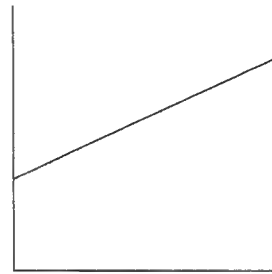
```
U/VelCurve [RM Lizard]1:
1:Linear <
```

Velocity curve

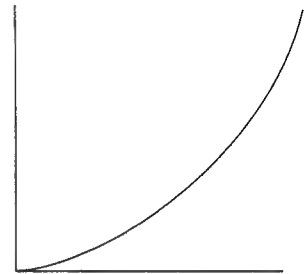
Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a velocity curve.

• **Velocity curve (1...12):** Selects the velocity curve used to interpret note velocity data for the element. The available velocity curve settings are detailed in the note below.

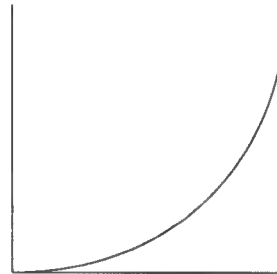
Note: The RM50 allows you to select one of twelve velocity curves for each voice element. Each velocity curve interprets received velocity information in a different manner, as shown by the illustrations below.



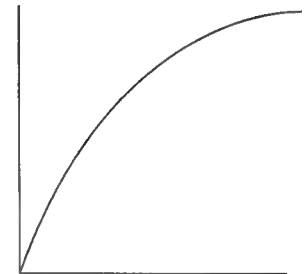
5: Offset2



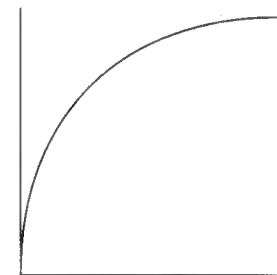
6: Hard1



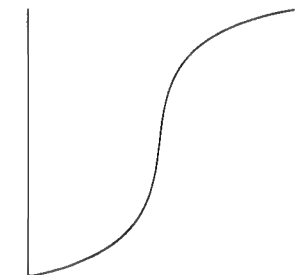
7: Hard2



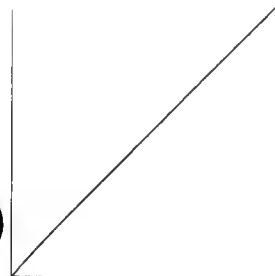
8: Easy1



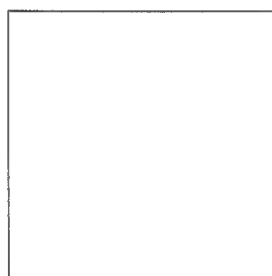
9: Easy2



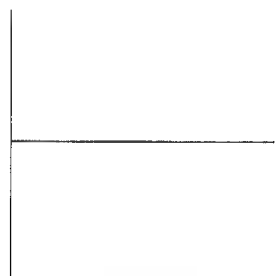
10: Crossfade1



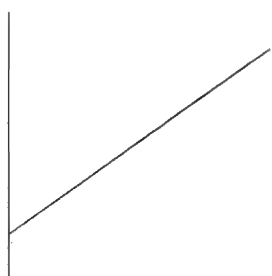
1: Linear



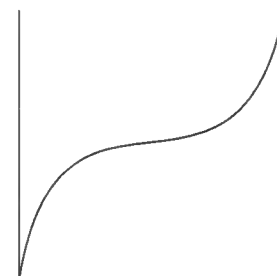
2: Constant1



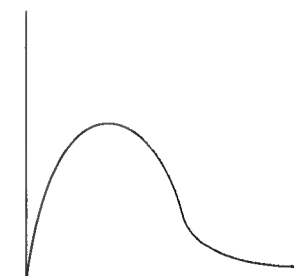
3: Constant2



4: Offset1



11: Crossfade2

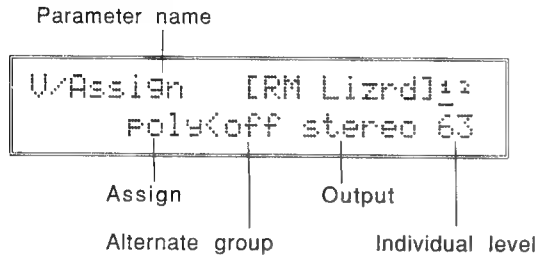


12: Crossfade3

12. Voice Output

USER VOICES ONLY

Summary: Determines whether the selected voice is to be played as a monophonic or polyphonic voice, specifies whether it is to be alternated with any other voices, and assigns it to the RM50's stereo or individual output jacks.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the assign, alternate group, output, and individual level parameters. Use the [+1/YES] or [-1/NO] key to change the values of these parameters.

- **Parameter name (Assign, AltGroup, Output, IndLevel):** Shows the name of the element output parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Assign (mono, poly, mono/alt, poly/alt):** Determines whether the voice is to be played monophonically or polyphonically. When "mono" is selected, each note played using the voice in question will take priority over any previous notes played using the same note. When the "poly" setting is used, all notes played with the voice will sound simultaneously, within the limits of the RM50's polyphonic note capacity. The "mono/alt" and "poly/alt" settings produce the same results, save that the voice's two elements are played alternately rather than in unison. These settings are useful, for example, when using a single voice consisting of two slightly different snare drum elements to simulate a drum roll.

- **Alternate group (off, 1...7):** Allows you to assign the voice to one of seven alternate groups which specify drum sounds which will not be played at the same time. The use of this setting is explained in the note below.
- **Output (stereo, ind1...ind6):** Selects the RM50 output jacks to which output from the voice is to be sent. Select "stereo" to output the voice as a mixed stereo signal, complete with pan settings. Select one of the "ind" settings to output the voice to the corresponding INDIVIDUAL OUTPUT jack.
- **Individual level (0...63):** Sets the output level of voices assigned to the INDIVIDUAL OUTPUT jacks.

Notes: In a real drum set, you would never hear the sound of a closed hi-hat at the same time as the open hi-hat. To more realistically reproduce the sound of a hi-hat, you will therefore want to assign both the open and closed hi-hat voices to one of the seven alternate groups, so that the RM50 will never play both of the sounds at the same time.

If you try this, you will find that you can play the open hi-hat voice, then "close" the hi-hat by playing the closed hi-hat voice before the open sound ends. Doing so will cut off the open hi-hat sound sharply, just as it would in real life.

You can use the AltGroup setting to realistically reproduce the long-and-short or open-and-muted sounds produced by other instruments such as maracas, guiros, triangles, bongos, and congas.

13. Voice Name

USER VOICES ONLY

Summary: Assigns a name to the selected voice.

```
U/Name      [RM Lizr d]_
Voice Name = [RM Lizr d]
```

Name

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to select the character you wish to change (the selected character will blink). Then use the [+1/YES] or [-1/NO] key to change the selected character.

- **Name:** Allows you to assign the selected voice a name of up to eight characters. The available characters are the same as those listed for the Macro Name function on page 54.

14. Voice Initialize

USER VOICES ONLY

Summary: Initializes all parameter settings of the selected voice.

```
U/Init?
I-MX 42 RM Lizr d
```

Voice

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Press the [SHIFT] and [+1/YES] keys to initialize all parameters for the selected voice. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the initialize operation.

- **Voice:** Indicates the bank, number, and name of the voice to be initialized. The voice selection cannot be changed using this display.

Notes: When you initialize a voice, its name and waveform selection will remain unchanged. All other parameter settings will be given the default values listed on the following page.

RM50 Voice Init Data

Common	Easy	Volume	127	Element (cont'd)	LFO	Speed	0	
		Balance	0			Delay	0	
		Pan	0			Initial phase	0	
		Pitch	0			Depth	0	
		Decay	0			Sensitivity	Level	0
		Filter	0				Pitch	0
		Element	Wave				Memory	No change
Number	No change						Filter	0
Direction	No change					Modulation	0	
Level			63			Pitch EG	Rate	off
Pan			16		Level		0	
Pitch			0		Delay	Reps	off	
EG	Attack	0	1st			off		
	Decay	63	Time			0		
	Release	63	Level			0		
	Punch	1	Pitch			0		
Filter	Type	off	Velocity curve			1:Linear		
	Cutoff	Max	Common	Assign		mono		
	Resonance	0		Alternate group		off		
	EG Rate	0		Output		stereo		
	EG Level	0		Individual output level		63		
LFO	Destination	off		Voice Name		No change		
	Wave	triangle						

15. Voice Recall

VOICE VARIATIONS & USER VOICES

Summary: Restores the parameters of the selected voice pitched voice to the values they had prior to editing.

```

U/Recall?
  I-MX  42 RM Lizard
  
```

Voice

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Press the [SHIFT] and [+1/YES] keys to restore all channel and note settings for the selected voice to the condition they had prior to editing. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm

your decision, or the [-1/NO] or [EXIT] key to cancel the recall operation.

- **Voice:** Indicates the bank, number, and name of the voice to be recalled. The voice selection cannot be changed using this display.

Notes: Whenever you edit a voice, the letter "V" which appears in the upper left corner of all Voice Edit mode displays will change to a small letter "v" to remind you that the sound has been edited. The RM50 will save the unedited data in a memory area known as the "recall buffer" even if you turn the power off. If you decide you don't like the changes you've made, you can use the Recall function to restore the original data.

When you use the Recall function to recall the old data for a voice, the edited data will take its place in the recall buffer. This means you can use the recall buffer to switch back and forth between the new and old settings, to compare the sounds they produce.

Once you begin editing another voice, however, all data for previous voice will be cleared from the buffer, and the currently recalled settings will become permanent. Also, the letter "V" will again appear as a capital letter the next time you select that voice, indicating that it is no longer possible to recall the old data.

16. Voice Copy

ALL VOICES

Summary: Copies voice parameters from one bank and voice number to another.



U/COPY?
to <I-MX 42 RM Lizard

Direction Bank Voice

Procedure: Use the [PAGE+] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the direction, bank, and voice settings. Use the [+1/YES] or [-1/NO] key to change these settings. Press the [SHIFT] and [+1/YES] keys to copy the voice. The message "Sure?" will appear in the upper row of the LCD. Press the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the copy operation.

Note: This function is useful when creating an edited version of an existing voice. Do not select a preset or variation voice bank (i.e., one beginning with the letter "P" or "I") if you have selected "to" as the direction, or an error message will appear when you attempt to copy the data.

You can use the "from" setting to copy voice data to the current voice number if you are editing a user voice (bank I-MX or C-MX). When you do so, all of the current voice settings will be replaced by the copied data. However, you can still restore the original settings using the Voice Recall function described above.

If you use the "to" setting to copy a voice, recall of the replaced data will be impossible.

- **Direction (to, from):** Determines whether the RM50 will copy the currently selected voice to another bank and voice number, or whether it will copy the data for another voice to the currently selected bank and voice number.
- **Bank:** Selects one of 23 voice banks.
- **Voice:** Selects a voice from the specified bank. The name of the selected voice appears after the voice number.

UTILITY MODE

The RM50's Utility mode collects a variety of functions which let you specify how the RM50's system operates and how it handles MIDI messages, as well as other functions which let you use data cards and the internal wave RAM option. The Demo Play function is also included in this mode.

To enter Utility mode, simply press the [UTILITY] key. The RM50 will display the name of the utility function group you last accessed. Use the [PAGE+] or [PAGE-] key to select the desired function group, then press the [+1/YES] key to enter that group.

To return to Play mode from Utility mode, press the [PLAY] key. You can also press the [EXIT] key while in this mode to return to the Utility mode function group display and select a different Utility mode function group. Press the [EXIT] key a second time while this display is showing will return you to Play mode.

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Functions in Utility Mode

The functions available in Utility mode are listed below. Once you have entered this mode and selected one of the function groups, you can select any of the functions within the group using the [PAGE+] or [PAGE-] keys.

UTL/System Press "+1/YES" to enter	System Utilities	Allows you to set parameters controlling the RM50's trigger input and click functions, and to adjust the note on velocity used by the [SOUND] key.
UTL/Sys/Trig/Trig No. #1<: 99 off fast	1. Trigger Input 1	Sets the gain, attenuation, and scan speeds used to process signals input to the selected TRIGGER INPUT jack.
UTL/Sys/Trig/Trig No. #1<: 4 0 3	2. Trigger Input 2	Sets the reject values used to limit interference to input to the selected TRIGGER INPUT jack.
UTL/Sys/Trig/Trig No. #1<: 1 60 10 Linear	3. Trigger Input 3	Specifies the note data transmitted from the MIDI OUT terminal in response to signals received by the selected TRIGGER INPUT jack.
UTL/Sys/Click/Sw off<:P-SD 108 SS Count	4. Click 1	Turns the RM50's click function on and off, and selects the voice used by this function.
UTL/Sys/Click/Level 127< 120 4/4	5. Click 2	Sets the voice level, tempo, and time signature used by the click function.
UTL/Sys/Sound Velocity = 127<	6. SOUND Key Velocity	Sets the velocity to be used when the SOUND key is pressed to check the sound produced by a voice.

UTILITY MODE

UTL/MIDI Press "+1/YES" to enter	MIDI Utility Group	Allows you to specify how MIDI program change and control change messages are received, set remote switch assignments, change the device number, and execute bulk dumps.
UTL/MIDI/Program change C01<= normal	1. Program Change Mode	Determines how the RM50 will respond to received program change messages.
UTL/MIDI/P.C.Table 001< Kit :I- 1 Rock 1	2. Program Change Table	Specifies the rhythm kit or voice selected by program numbers received on channels using the "table" program change mode setting.
UTL/MIDI/Controller sw on<	3. Control Change	Determines whether the RM50 will respond to received control change, pitch bend, and aftertouch messages.
UTL/MIDI/Control assign Pitch <=121:Pitch Bend	4. Control Change Assign	Assigns a control change number to each of the RM50's seven control change parameters.
UTL/MIDI/Remote switch C16< PLAY =C 2(0000)	5. Remote Switch	Selects a channel for remote switch message reception, and assigns a MIDI note to each of the twelve keys on the RM50's front panel.
UTL/MIDI/Device number off<	6. Device Number	Sets the device number used by the RM50 when transmitting and receiving system exclusive data.
UTL/MIDI/Transmit bulk Type = all <	7. Bulk Transmit	Transmits RM50 data of a selected type to another device as a system exclusive bulk dump.

UTL/DataCard Press "+1/YES" to enter	Data Card Utility Group	Allows the transfer of data to and from data cards, and the formatting of data cards to accept RM50 data.
UTL/DataCard/Save ? Card bank = 1<[RM50]	1. Save to Card	Saves all RM50 data to a RAM card inserted in the RM50's DATA slot.
UTL/DataCard/Load ? Card bank = 1<[RM50]	2. Load from Card	Loads all RM50 data from a RAM card inserted in the RM50's DATA slot.
UTL/DataCard/Format ? Card bank = 1<[RM50]	3. Format Card	Prepares a RAM card for RM50 data storage.

UTL/WaveRAM Press "+1/YES" to enter	Wave RAM Utility Group	Allows you to make use of the RM50 wave RAM option. (The functions in this group can only be accessed if a wave RAM module has been installed in the RM50.)
UTL/WaveRAM/Name 1<: Rec BD F	1. Waveform Name	Assigns a name to a waveform number in the wave RAM area.
UTL/WaveRAM/Copy ? W1< 2 Rec BD F > 1 Rec	2. Card Waveform Copy	Copies a waveform from a wave card into the wave RAM area.
UTL/WaveRAM/Delete ? I 1: Rec BD F<	3. Waveform Delete	Deletes individual waveforms from the wave RAM area.
UTL/WaveRAM/Memory 512 kbyte available	4. Wave RAM Memory	Displays the amount of wave RAM capacity that is available for use.
UTL/WaveRAM/Initialize?	5. Wave RAM Initialize	Clears all waveform data from the wave RAM area.
UTL/WaveRAM/SampleDump Mode = normal<	6. Sample Dump Mode	Selects the sample dump format used by incoming sample dumps.

UTL/Demo Press "+1/YES" to enter	Demo Utility	Contains the Demo Play function.
UTL/Demo stop<Pre Song1:SKINBIT	1. Demo Play	Plays the RM50 demonstration songs, as well as demos contained on waveform cards.

System Utility Group

Summary: Allows you to set parameters controlling the RM50's trigger input and click functions, and to adjust the note on velocity used by the [SOUND] key.

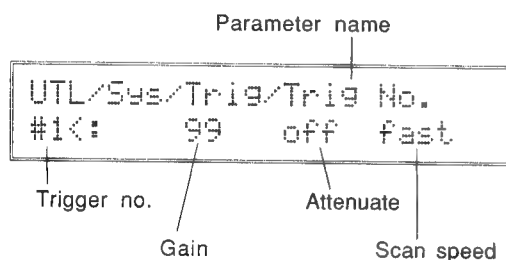
Procedure: Use the [PAGE-] key to select the display above, then press the [+1/YES] key to enter the System Utility function group.

```
UTL/System
Press "+1/YES" to enter
```

1. Trigger Input 1

SYSTEM UTILITY

Summary: Sets the gain, attenuation, and scan speeds used to process signals input to the selected TRIGGER INPUT jack.



Procedure: Use the [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the trigger number setting or the gain, attenuate, and scan speed parameters. Use the [+1/YES] or [-1/NO] key to select a different trigger, or to change the parameter values.

- **Parameter name (Trig No., Gain, Atn, Scan):** Shows the name of the input trigger parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Trigger no. (#1...#6):** Selects one of the six TRIGGER INPUT jacks. The settings made using the remaining three parameters displayed by this function affect the TRIGGER INPUT jack selected using this parameter.

- **Gain (0...99):** Adjusts the level of signals input to the selected TRIGGER INPUT jack. Higher values increase the input level.
- **Attenuation (off, on):** Determines whether signals input to the selected TRIGGER INPUT jack will be attenuated. This should be set to "on" for audio equipment and other triggering devices with particularly high output levels.
- **Scan speed (fast, slow):** Sets the rate with which the selected TRIGGER INPUT jack is scanned for input signals. The "fast" setting provides faster scanning; the "slow" setting provides somewhat slower scanning, but higher scan precision.

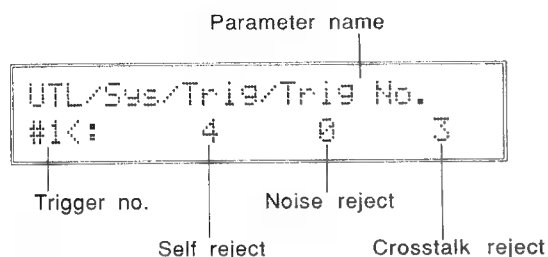
Notes: Whenever you select a different TRIGGER INPUT jack using the "trigger no." parameter, the jack selection displayed by the Trigger Input 2 and Trigger Input 3 functions will reflect this change. This feature makes it easy to adjust all the settings for a single TRIGGER INPUT jack.

You can also use the Display Chase function (see page 51) to switch between triggers when adjusting the parameters in this display.

2. Trigger Input 2

SYSTEM UTILITY

Summary: Sets the reject values used to limit interference to input to the selected TRIGGER INPUT jack.



Procedure: Use the [PAGE-] or [PAGE+] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the trigger number setting or the self reject, noise reject, or crosstalk reject parameters. Use the [+1/YES] or [-1/NO] key to select a different trigger, or to change the parameter values.

- **Parameter name (Trig No., SelfRej, NoiseRej, CrossRej):** Shows the name of the input trigger parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Trigger no. (#1...#6):** Selects one of the six TRIGGER INPUT jacks. The settings made using the remaining three parameters displayed by this function affect the TRIGGER INPUT jack selected using this parameter.

- **Self reject (1...99):** Sets the time, in 10 msec units, during which the RM50 will ignore signals input to the selected TRIGGER INPUT jack after a signal is received. This setting prevents double triggering.
- **Noise reject (0...9):** Sets the level at which the RM50 distinguishes between background noise and trigger signals received by the selected TRIGGER INPUT jack. Higher values eliminate more noise, but also reduce the RM50's sensitivity to small trigger signals.
- **Crosstalk reject (0...9):** Sets the level at which the RM50 filters out crosstalk to the other triggers. Higher values reduce the degree to which the signals received by the selected TRIGGER INPUT jack will be duplicated by signals received by other jacks (due to sympathetic vibrations, etc.). However, this function may also reduce the RM50's sensitivity to two-drum flams.

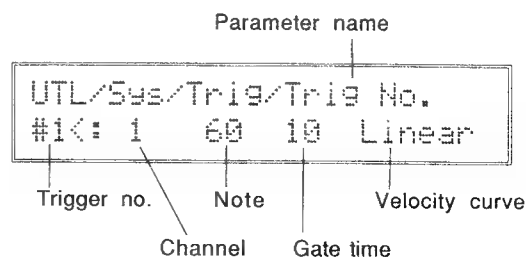
Notes: Whenever you select a different TRIGGER INPUT jack using the "trigger no." parameter, the jack selection displayed by the Trigger Input 1 and Trigger Input 3 functions will reflect this change. This feature makes it easy to adjust all the settings for a single TRIGGER INPUT jack.

You can also use the Display Chase function (see page 51) to switch between triggers when adjusting the parameters in this display.

3. Trigger Input 3

SYSTEM UTILITY

Summary: Specifies how the RM50's audio-to-MIDI converter generates note information in response to signals received by the selected TRIGGER INPUT jack.



UTILITY MODE

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the parameter number setting, or the channel, note, gate time, and velocity curve parameters. Use the [+1/YES] or [-1/NO] key to select a different trigger, or to change the parameter values.

- **Parameter name (Trig No., Channel, Note, GateTime, VelCurve):** Shows the name of the trigger input parameter that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- **Trigger no. (#1...#6):** Selects one of the six TRIGGER INPUT jacks. The settings made using the remaining four parameters displayed by this function affect the TRIGGER INPUT jack selected using this parameter.
- **Channel (1...16):** Sets the channel on which MIDI output for the selected TRIGGER INPUT jack is to be transmitted. The RM50 will play all notes received from the TRIGGER INPUT jack using the setup for this channel, and at the same time output MIDI note information via the MIDI OUT jack using this channel.
- **Note (0...127):** Sets the note number to be generated in response to input received by the selected TRIGGER INPUT jack when channel mode of the channel selected by the preceding parameter is set to "pitched voice" or "off". If the channel mode is set to "rhythm kit", the RM50 will play (and output) the note number assigned to the jack in the rhythm kit selected for the channel in question. (See the description of the Trigger Note Assign function on page 63.)
- **Gate time (1...99):** Specifies the interval, in 10 msec units, between note on and note off messages generated in response to input received by the selected TRIGGER INPUT jack.
- **Velocity curve (Linear, Hard1, Hard2, Soft1, Soft2):** Selects the velocity curve used to create velocity information for notes generated in response to input received by the selected TRIGGER INPUT jack.

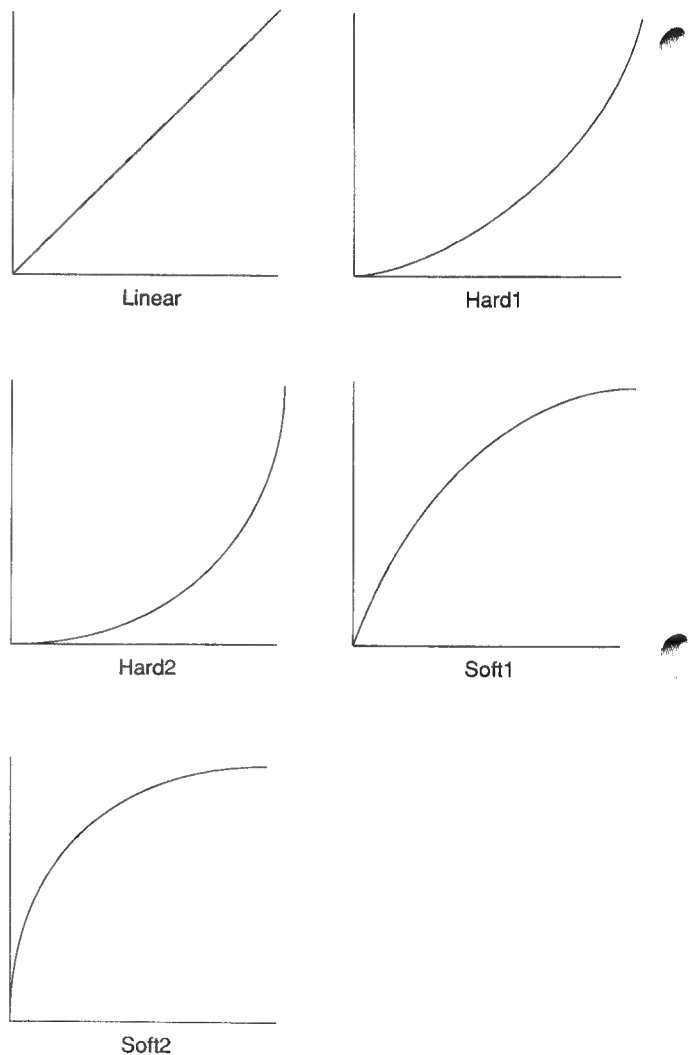
Notes: Whenever you select a different TRIGGER INPUT jack using the "trigger no." parameter, the jack selection displayed by the Trigger Input

1 and Trigger Input 2 functions will reflect this change. This feature makes it easy to adjust all the settings for a single TRIGGER INPUT jack.

You can use the Display Chase function (see page 51) to switch between triggers when adjusting the parameters in this display.

You can also press the [EDIT] key to enter Setup Edit mode from this function should you wish to edit or check the settings for the selected rhythm kit note.

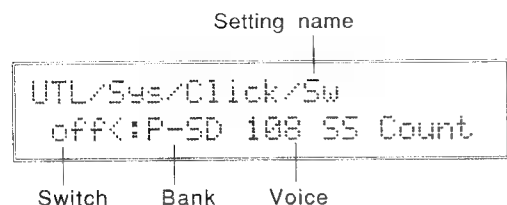
The RM50 allows you to select one of five velocity curves for each TRIGGER INPUT jack. Each velocity curve generates velocity information in a different manner, as shown by the illustrations below.



4. Click 1

SYSTEM UTILITY

Summary: Turns the RM50's click function on and off, and selects the voice used by this function.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the switch, bank, and voice settings. Use the [+1/YES] or [-1/NO] key to change these settings.

- *Setting name (Sw, Bank, Voice):* Shows the name of the click setting that has been selected. This display changes each time you move the pointer in the lower row of the LCD.

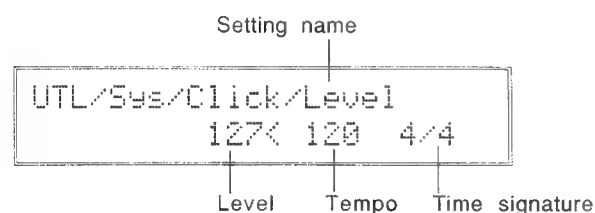
- *Switch (off, on, midi):* Switches the click function on and off. When set to “on”, the RM50 will play a steady beat using the voice selected this function, and the level, tempo, and time signature specified by the Click 2 function described below. When it is set to “midi”, the click function will turn on and off in response to system realtime control (start, stop, and continue) messages received at the MIDI IN terminal. The “midi” setting also causes the click function to synchronize to MIDI clock data received at the MIDI IN terminal, ignoring the tempo setting of the Click 2 function below.
- *Bank:* Selects one of 23 voice banks, or “off”.
- *Voice:* Selects a voice from the specified bank. The name of the selected voice appears after the voice number.

Note: You can enter Voice Edit mode to edit the voice you select by pressing the [EDIT] key while this display is showing.

5. Click 2

SYSTEM UTILITY

Summary: Sets the voice level, tempo, and time signature used by the click function.



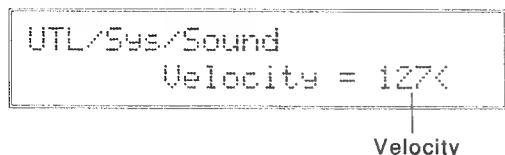
Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the level, tempo, and time signature settings. Use the [+1/YES] or [-1/NO] key to change these settings.

- *Setting name (Level, Tempo, TimeSig):* Shows the name of the click setting that has been selected. This display changes each time you move the pointer in the lower row of the LCD.
- *Level (0...127):* Sets the voice level used by the click function. This setting is used in place of the voice's own volume parameter.
- *Tempo (40...250):* Sets the tempo used by the RM50 click function, in beats per minute. If you select “midi” as the switch setting of the Click 1 function described above, the click function will synchronize to MIDI clock data received at the MIDI IN terminal, ignoring this tempo setting.
- *Time signature (1/4 ... 8/4, 1/8 ... 16/8 ... 1/16 ... 32/16):* Specifies the time signature used by the RM50 click function.

6. SOUND Key Velocity

SYSTEM UTILITY

Summary: Sets the velocity to be used when the [SOUND] key is pressed to check the sound produced by a voice.



```
UTL/Sys/Sound
Velocity = 127<
```

Velocity

Procedure: Use the [PAGE+] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to change the value of the velocity setting.

- *Velocity (1...127):* Sets the velocity used when a note is played by pressing the [SOUND] key.

Notes: You can press the [SOUND] key at any time while a voice is selected to hear the sound produced by that voice. (As an exception, this function will not work while the Demo Play function described on page 109 is displayed, as the RM50 not accept any MIDI data while this function is displayed.) The [SOUND] key allows you to check your voice selection or test the effects of edits without having to connect the RM50 to an external keyboard or other MIDI controller.

MIDI Utility Group

Summary: Allows you to specify how MIDI program change and control change messages are received, set remote switch assignments, change the device number, and execute bulk dumps.

UTL/MIDI

Press "+1/YES" to enter

Procedure: Use the [PAGE+] or [PAGE-] key to select the display above, then press the [+1/YES] key to enter the MIDI Utility function group.

1. Program Change Mode

MIDI UTILITY

Summary: Determines how the RM50 will respond to received program change messages.

UTL/MIDI/Program change
C01<= normal

Channel Program change mode

Procedure: Use the [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer between the channel and program change mode settings. Use the [+1/YES] or [-1/NO] key to select a different channel, or to change the program change mode setting for the selected channel.

- **Channel (C01...C16):** Selects one of the sixteen MIDI channels.
- **Program change mode (off, normal, table):** Determines which of three program change modes the selected MIDI channel will use.

Notes: When the program change mode is set to "off", the RM50 will ignore any program change messages received on the channel in question.

When "normal" is selected, the RM50 will switch to the rhythm kit or voice normally selected by the received program change number. Whether a rhythm kit or voice is selected depends on the channel's current channel mode setting at the time is received.

You can also use bank select messages in this mode to switch the channel between the

rhythm kit and pitched voice channel modes and to select a rhythm kit or voice bank. Program change messages following the bank select message will then select a rhythm kit or voice from the new bank. The bank select numbers received by the RM50 are listed in the following table.

BANK SELECT NUMBER	RM50 BANK		
	CHANNEL MODE	BANK TYPE	CATEGORY
81	Rhythm kit	Internal	
82	Rhythm kit	Card	
83	Rhythm kit	Preset	
84	Pitched voice	Internal	MX (Mix)
85	Pitched voice	Card	MX (Mix)
86	Pitched voice	—	
87	Pitched voice	Internal	BD (Kick)
88	Pitched voice	Card	BD (Kick)
89	Pitched voice	Preset	BD (Kick)
90	Pitched voice	Internal	SD (Snare)
91	Pitched voice	Card	SD (Snare)
92	Pitched voice	Preset	SD (Snare)
93	Pitched voice	Internal	TM (Tom)
94	Pitched voice	Card	TM (Tom)
95	Pitched voice	Preset	TM (Tom)
96	Pitched voice	Internal	CY (Cymbal)
97	Pitched voice	Card	CY (Cymbal)
98	Pitched voice	Preset	CY (Cymbal)
99	Pitched voice	Internal	PC (Perc)
100	Pitched voice	Card	PC (Perc)
101	Pitched voice	Preset	PC (Perc)
102	Pitched voice	Internal	SE (Effect)
103	Pitched voice	Card	SE (Effect)
104	Pitched voice	Preset	SE (Effect)
105	Pitched voice	Internal	Slot 1
106	Pitched voice	Card	Slot 2
107	Pitched voice	Preset	Slot 3

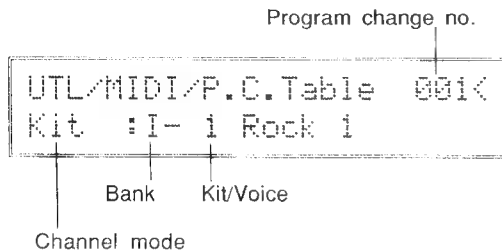
When "table" is selected, the RM50 will switch to the rhythm kit or voice specified for the received program change number in its program change table. This program change mode allows the RM50 to change the channel mode of a channel in response to a received program change message. (It can also be used to set the channel mode to "off".)

The contents of the program change table are set using the Program Change Table function, described below.

2. Program Change Table

MIDI UTILITY

Summary: Specifies the rhythm kit or voice selected by program numbers received on channels using the “table” program change mode setting.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the program change number or the channel mode, bank, and kit or voice settings. Use the [+1/YES] or [-1/NO] key to select a different program change number, or to change the settings for the selected program change number.

- *Program change no. (001...128):* Selects one of 128 program change numbers.

- *Channel mode (Kit, Vce, Off):* Sets the channel mode specified by the selected program change number.
- *Bank:* Sets one of three rhythm kit banks or 23 voice banks to be specified by the selected program change number.
- *Kit/Voice:* Sets a rhythm kit or voice to be selected by the selected program change number. The name of the kit or voice appears after its number. (A row of dashes is displayed in place of the kit/voice number and name when “OFF” is selected as the bank.)

Notes: The program change table settings made using this function are only valid for channels using the “table” program change mode, which is set using the Program Change Mode function described above.

3. Control Change

MIDI UTILITY

Summary: Determines whether the RM50 will respond to received control change, pitch bend, and aftertouch messages.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above, and the [+1/YES] or [-1/NO] key to change the control change switch setting.

- *Control change switch (off, on):* Determines whether the RM50 will respond to received control change, pitch bend, and aftertouch messages. When this setting is switched to “off”, the RM50 will ignore all such messages. When set to “on”, the RM50 will respond to the control change messages enabled for each rhythm kit note or channel by the Control Change function available in Setup Edit mode (see page 62). The actual control change numbers used to affect controllable parameters are assigned using the Control Change Assign function described below.

4. Control Change Assign

MIDI UTILITY

Summary: Assigns a control change number to each of the RM50's seven control change parameters.

```

UTL/MIDI/Control assign
Pitch <= :Pitch Bend
  
```

Parameter Control change number

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer between the parameter and control change number settings. Use the [+1/YES] or [-1/NO] key to select a different voice parameter, or to change the change these settings.

- *Parameter (Pitch, Decay, Pan, Filter, Balance, Mod, Volume):* Selects one of the seven voice parameters which can be adjusted by MIDI control change messages. The precise nature of each of these parameters is detailed in the Control Change function available in Setup Edit mode (see page 62).
- *Control change number (001...031, 033...120, Pitch Bend, After Touch):* Assigns the selected parameter to be controlled by a control change number, or by pitch bend or aftertouch messages. The name of the controller normally associated with the control change number, if any, is displayed after the number.

5. Remote Switch

MIDI UTILITY

Summary: Selects a channel for remote switch message reception, and assigns a MIDI note to each of the twelve keys on the RM50's front panel.

```

UTL/MIDI/Remote switch
C16<      PLAY =C 2(0000)
  
```

Channel Key Note

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the channel, key, and note settings. Use the [+1/YES] or [-1/NO] key to change the channel setting, to select a different key, or to assign a different note to the selected key.

- *Channel (C01...C16):* Selects the MIDI channel on which the RM50 will receive remote switch messages.
- *Key:* Selects one of the RM50's twelve front panel switches.

- *Note (C-2...G8):* Assigns a MIDI note to the selected panel switch. The note number is displayed after the note name. When the RM50 receives a note on message specifying an assigned note number on the channel selected for this function, it will respond as if the corresponding panel switch had been pressed.

Notes: This function allows the RM50 to be programmed from a MIDI keyboard or other device capable of sending note information. In most cases, the RM50 will respond to note messages specifying assigned notes just as if the corresponding front panel key had been pressed. The RM50's display will not scroll continuously in response to such note messages, however, as it will when the [PAGE+], [PAGE-], [+1/YES], or [-1/NO] key are pressed and held.

Please note that the RM50 will not receive any MIDI data when the Demo Play function (described on page 109) is displayed. Therefore, although it is possible to select the Demo Play display using the remote switch function, you cannot use it to start demo playback or exit the display.

6. Device Number

MIDI UTILITY

Summary: Sets the device number used by the RM50 when transmitting and receiving system exclusive data.

```
UTL/MIDI/Device number
                        off<
```

Device number

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above, and the [+1/YES] or [-1/NO] key to change the device number setting.

- *Device number (off, 1...16, all):* Selects the channel used to transmit and receive system exclusive messages. When “off” is selected, the RM50 will neither transmit nor receive system exclusive messages. When “all” is selected, it will transmit system exclusive messages on channel 1, and receive system exclusive messages sent on any channel.

7. Bulk Transmit

MIDI UTILITY

Summary: Transmits RM50 data of a selected type to another device as a system exclusive bulk dump.

```
UTL/MIDI/Transmit bulk
Type =   all   <
```

Data type

Procedure: Use the [PAGE+] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a data type. If you select “kit” or “vce” as the data type, use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to bank, kit or voice, and destination settings. Use the [+1/YES] or [-1/NO] key to change these settings. Then press the [SHIFT] and [+1/YES] keys to transmit the selected bulk data. The message “Sure?” will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the bulk dump.

- *Data type:* Selects the type of data to be transmitted. The following types of data may be dumped:

Data Type	Explanation
all	All system setup data, rhythm kits, and user voices
system	All system setup data
all kit	All rhythm kits
all voice	All user voices and voice variations
kit	One rhythm kit
vce	One user voice

- *Bank:* Selects one of three rhythm kit banks or 23 voice banks. This setting is only displayed when “kit” or “vce” is selected as the data type.
- *Kit/Voice:* Selects a rhythm kit or voice from the specified bank to be transmitted. This setting is only displayed when “kit” or “vce” is selected as the data type.
- *Destination:* Designates the program number to which the rhythm kit or voice is to be transmitted. Kits are dumped to the internal bank; voices are dumped to the internal user bank (IMX). This setting is displayed only when “kit” or “vce” is selected as the data type.

Notes: When you use this function to transmit data from one RM50 to another, the device number settings of both units must be the same. The device number is set using the Device number function described above.

The message "Transmitting bulk..." will appear in the lower row of the LCD while data is being transmitted. The display will return to normal as soon as the bulk dump is ended.

The RM50 is capable of receiving bulk data transmitted by another device at any time as long as it is not playing a note or performing some other operation. (It will also not receive MIDI data while the Demo Play function described on page 109 is displayed.) The words "Receiving bulk..." will appear in the lower row of the LCD while data is being received. If a problem occurs during the dump, an error message will take the place of this message. If this should happen, press the [EXIT] key to clear the error and retry the dump after solving the cause of the problem. (See the list of error messages on page 122.)

Data Card Utility Group

Summary: Allows the transfer of data to and from data cards, and the formatting of data cards to accept RM50 data.

```
UTL/DataCard
Press "+1/YES" to enter
```

Procedure: Use the [PAGE+] or [PAGE-] key to select the display above, then press the [+1/YES] key to enter the Data Card Utility function group.

1. Save to Card

DATA CARD UTILITY

Summary: Saves all RM50 data to a RAM card inserted in the RM50's DATA slot.

```
UTL/DataCard/Save ?
Card bank = 1[RM50 ]
```

Procedure: Use the [PAGE-] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a card bank. Then press the [SHIFT] and [+1/YES] keys to save the RM50's data to the selected bank. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the save operation.

- **Card bank (1, 2):** Selects one of the two data banks possessed by an MCD64 data card. The device type for which the selected bank has been formatted appears in the brackets after this number.

Notes: The RM50 can use either an MCD32 or an MCD64 data card to store its data. The MCD64 data card possesses two card banks, each of which can be used to store a full set of system setup, rhythm kit, user voice, and voice variation data. The card bank last selected using one of the Data Card Utility functions is the one that will be referred to whenever you select a rhythm kit or voice from a bank beginning with the letter "C".

The name "RM50" must be displayed as the format type for the selected card bank in order for the RM50 to use that bank to save data. If the "unfmt" message or another format type appears after the bank number, use the Format Card function described on page 103 to ready the bank before attempting to save data.

The "unfmt" message will appear as the format type of card bank 2 when an MCD32 data card is inserted in the DATA slot. This is because the MCD32 has only one card bank. It is never possible to save data to card bank 2 when using an MCD32 data card.

If a problem occurs during the save operation, an error message will appear in the LCD. Should this happen, press the [EXIT] key to clear the error and retry the operation after solving the cause of the problem. (See the list of error messages on pages 121 and 122.)

2. Load from Card

DATA CARD UTILITY

Summary: Loads all RM50 data from a RAM card inserted in the RM50's DATA slot.

```
UTL/DataCard/Load ?
Card bank = 1[RM50 ]
```

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a card bank. Then press the [SHIFT] and [+1/YES] keys to load the data from the selected bank into the RM50. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the load operation.

- **Card bank (1, 2):** Selects one of the two data banks possessed by an MCD64 data card. The device type for which the selected bank has been formatted appears in the brackets after this number.

Notes: The RM50 can load data which it (or another RM50) has stored to an MCD32 or an MCD64 data card. The MCD64 data card possesses two card banks, each of which can store a full set of system setup, rhythm kit, user voice, and voice variation data. The card bank last selected using

one of the Data Card Utility functions is the one that will be referred to whenever you select a rhythm kit or voice from a bank beginning with the letter "C".

The name "RM50" must be displayed as the format type for the selected card bank in order for the RM50 to load data from that bank. If the letters "unfmt'd" or another format type appear after a bank number, that bank must be prepared using the Format Card function, described below, before it can store RM50 data.

The "unfmt'd" message will appear as the format type of card bank 2 when an MCD32 data card is inserted in the DATA slot. This is because the MCD32 has only one card bank. It is never possible to load data from card bank 2 when using an MCD32 data card.

Of course, the bank you select must contain previously saved data in order for the load operation to work. If you try to load from a bank which does not contain any data, an error will occur.

If a problem occurs during the load operation, an error message will appear in the LCD. Should this happen, press the [EXIT] key to clear the error and retry the operation after solving the cause of the problem. (See the list of error messages on pages 121 and 122.)

3. Format Card

DATA CARD UTILITY

Summary: Prepares a RAM card for RM50 data storage.

```
UTL/DataCard/Format ?
Card bank = 1[RM50 ]
```

Procedure: Use the [PAGE+] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a card bank. Then press the [SHIFT] and [+1/YES] keys to format the selected bank. The message "Sure?" will appear in the upper row of the LCD. Press either

the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the format operation.

- **Card bank (1, 2):** Selects one of the two data banks possessed by an MCD64 data card. The device type for which the selected bank has been formatted appears in the brackets after this number.

UTILITY MODE

Notes: The RM50 can use either an MCD32 or an MCD64 data card to store data. The MCD64 data card possesses two card banks, each of which can be used to store a full set of system setup, rhythm kit, user voice, and voice variation data. The card bank last selected using one of the Data Card Utility functions is the one that will be referred to whenever you select a rhythm kit or voice from a bank beginning with the letter "C".

The name "RM50" must be displayed as the format type for the selected card bank in order for the RM50 to save data to that bank. If the letters "unfmt" or another format type appear after a bank number, the bank must be formatted using this operation.

The "unfmt" message will appear as the format type of card bank 2 when an MCD32 data card is inserted in the DATA slot. This is because the MCD32 has only one card bank. It is never possible to format card bank 2 when using an MCD32 data card.

If a problem occurs during the format operation, an error message will appear in the LCD. Should this happen, press the [EXIT] key to clear the error and retry the operation after solving the cause of the problem. (See the list of error messages on pages 121 and 122.)

After formatting a card bank, you must store data in it using the Save to Card function, described on page 102, before you can load data from it using the Load from Card function described above.

Wave RAM Utility Group

Summary: Allows you to make use of the RM50 wave RAM option. (The functions in this group can only be accessed if a wave RAM module has been installed in the RM50.)

Procedure: Use the [PAGE+] or [PAGE-] key to select the display above, then press the [+1/YES] key to enter the Wave RAM Utility function group.

```
UTL/WaveRAM
Press "+1/YES" to enter
```

1. Waveform Name

WAVE RAM UTILITY

Summary: Assigns a name to a waveform number in the wave RAM area.

```
UTL/WaveRAM/Name
1K: Rec BD P
```

Waveform
number Name

Procedure: Use the [PAGE-] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to move the cursor between the waveform number and the name. Use the [+1/YES] or [-1/NO] key to select a waveform. When the pointer is located at the waveform name, use the [▷] key (or the [SHIFT] and [▷] keys) to select the character you wish to change (the selected character will blink), then use the [+1/YES] or [-1/NO] key to change the selected character. Press the [EXIT] key to return to the previous display when you've finished naming the waveform.

- **Waveform number:** Selects one of the waveforms that have been loaded into the RM50's wave RAM area.
- **Name:** Allows you to input a name for the selected waveform. The available characters are the same as those listed for the Macro Name function on page 54.

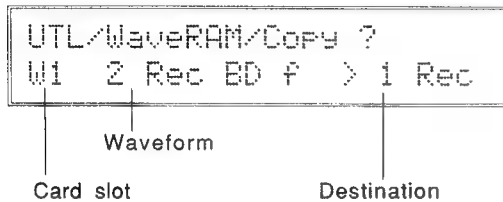
Notes: A row of asterisks will appear in place of a waveform name for waveform numbers which do not contain any data. Before you can name a waveform, you must first load data to the wave RAM area. You can do so either with the Waveform Copy function described below, or by transmitting the data to the RM50 as a sample dump. (For details on sample dumps, see the description of the Sample Dump Mode function on page 108.)

If you attempt to change the name following a waveform number that does not contain any data, an error message will appear. Should this happen, press the [EXIT] key to clear the error, then select a different waveform number or exit the function.

2. Card Waveform Copy

WAVE RAM UTILITY

Summary: Copies a waveform from a wave card into the wave RAM area.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer among the card number, waveform number, and destination settings, and the [+1/YES] or [-1/NO] key to change these settings. Then press the [SHIFT] and [+1/YES] keys to copy the selected waveform to the wave RAM area. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the copy operation.

- **Card slot (W1, W2, W3):** Selects one of the three WAVEFORM slots.
- **Waveform:** Specifies a waveform from the card in the selected WAVEFORM slot. The name of the selected waveform will appear after its number.

- **Destination:** Specifies the wave RAM waveform number to which the selected card waveform is to be copied. The first three characters of the name currently assigned to this waveform appear after its number.

Notes: Three asterisks will appear after destination numbers which do not yet contain any waveform data. If you copy data to a destination which already contains waveform data, the old data will be replaced by the new data. Therefore, make sure that you do not need the old data before you execute the copy operation.

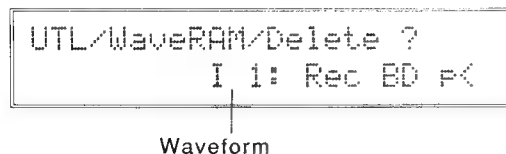
The RM50 optional wave RAM area can hold a maximum of 64 waveforms. However, the actual number of waveforms it can hold depends upon the size of the waveforms loaded.

If a problem occurs during the copy operation, an error message will appear in the LCD. Should this happen, press the [EXIT] key to clear the error and retry the operation after solving the cause of the problem. (See the list of error messages on page 122.)

3. Waveform Delete

WAVE RAM UTILITY

Summary: Deletes individual waveforms from the wave RAM area.



Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Use the [+1/YES] or [-1/NO] key to select a waveform number. Then press the [SHIFT] and [+1/YES] keys to delete the selected waveform. The mes-

sage "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] or [EXIT] key to cancel the delete operation.

- **Waveform:** Selects a waveform from the wave RAM area. The name of the selected waveform will appear after its number.

Notes: A row of asterisks will appear in place of a waveform name for waveform numbers which do not contain any data. Before you can delete waveforms, you must first load data to the wave RAM area. You can do so either with the Waveform Copy function described below, or by transmitting the data to the RM50 as a sample dump. (For details on sample dumps, see the description of the Sample Dump Mode function on the following page.)

If you attempt to use the Waveform Delete function with a waveform number that does not contain any data, an error message will appear. Should this happen, press the [EXIT] key to clear the error, then select a different waveform number or exit the function.

4. Wave RAM Memory

WAVE RAM UTILITY

Summary: Displays the amount of wave RAM capacity that is available for use.

```

UTL/WaveRAM/Memory
    512 kbyte available
  
```

Available memory

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. The amount of available wave RAM will appear in the display.

- **Available memory:** Displays the amount of wave RAM capacity that is currently available for use. This value changes as waveforms are copied to or deleted from the wave RAM area.

Notes: The optional wave RAM area has a total capacity of 512 kilobytes. The number of waveforms that this area can hold depends upon the amount of memory occupied by the waveforms loaded.

5. Wave RAM Initialize

WAVE RAM UTILITY

Summary: Clears all waveform data from the wave RAM area.

```

UTL/WaveRAM/Initialize?
  
```

Procedure: Use the [PAGE+] or [PAGE-] key to select the display shown above. Press the [SHIFT] and [+1/YES] keys to clear all waveform data from the wave RAM area. The message "Sure?" will appear in the upper row of the LCD. Press either the [+1/YES] key to confirm your decision, or the [-1/NO] key to cancel the initialize operation.

Notes: You should use this operation to initialize the wave RAM area after installing a wave RAM module in your RM50. You can also use it to clear all waveform data from the wave RAM area at once. To clear individual waveforms from the wave RAM area, use the Waveform Delete function described above.

6. Sample Dump Mode

WAVE RAM UTILITY

Summary: Selects the sample dump format used by incoming sample dumps.

```
UTL/WaveRAM/SampleDump  
Mode = normal<
```

Mode

Procedure: Use the [PAGE+] key to select the display shown above, and the [+1/YES] or [-1/NO] key to change the device number setting.

- *Mode (normal, TX16W):* Switches between the normal and TX16W sample dump formats. The selected data format will be used when receiving incoming sample dumps.

Note: The RM50 is capable of receiving sample dumps sent using the Yamaha TX16W format, as well as those using the standard sample dump data format. It will always accept sample dumps in either format, regardless of the Sample Dump Mode setting. If it receives a sample dump using the wrong format, however, the sample data may sound noisy when played back. We therefore recommend that you use the correct Sample Dump Mode setting when transmitting sample dumps to your RM50.

The RM50 is capable of receiving sample dumps at any time. (There is one exception: the RM50 will not accept any incoming MIDI data when the Demo Play function is displayed.) Bear in mind, however, that the sending device and the RM50 must be set to use the same device number. Incoming samples are always assigned to the first available waveform number.

An error message will appear in the LCD if a problem occurs when the RM50 is receiving a sample dump. Should this happen, press the [EXIT] key to clear the error and retry the operation after solving the cause of the problem. (See the list of error messages on page 122.)

Demo Utility

Summary: Contains the Demo Play function.

```
UTL/Demo
Press "+1/YES" to enter
```

Procedure: Use the [PAGE+] key to select the display above, then press the [+1/YES] key to display the Demo Play function.

1. Demo Play

Summary: Plays the RM50 demonstration songs, as well as demos contained on waveform cards.

```
UTL/Demo
stop<Pre Song1:SKINBIT
```

Play
status

Bank

Song

Procedure: Use the [▷] key (or the [SHIFT] and [▷] keys) to move the pointer to the play status indicator or the bank and song settings. Use the [+1/YES] or [-1/NO] key to change the bank or song selection. Then, with the pointer located at the play status indicator, press the [+1/YES] key to start playback. Press the [-1/NO] key once to stop playback.

- **Play status (play, stop):** Indicates when the RM50 is playing a demo song. The word "play" appears here when a song is playing; "stop" appears before playback is started, or after it has been stopped.
- **Bank (Pre, W-1...W-3):** Switches between the internal demo song bank (Pre) and the demo song data banks on cards inserted in the wavecard slots (W-1 to W-3).
- **Song:** Selects a demo song for playback. The name of the selected song appears after its number.

Notes: The RM50 is programmed with two demo songs which display its capabilities. In addition to these songs, the Demo Play function can be used to play back the demo songs contained on certain wave cards.

The RM50 will accept no MIDI data or input from the audio trigger inputs while this function is displayed.

UTILITY MODE